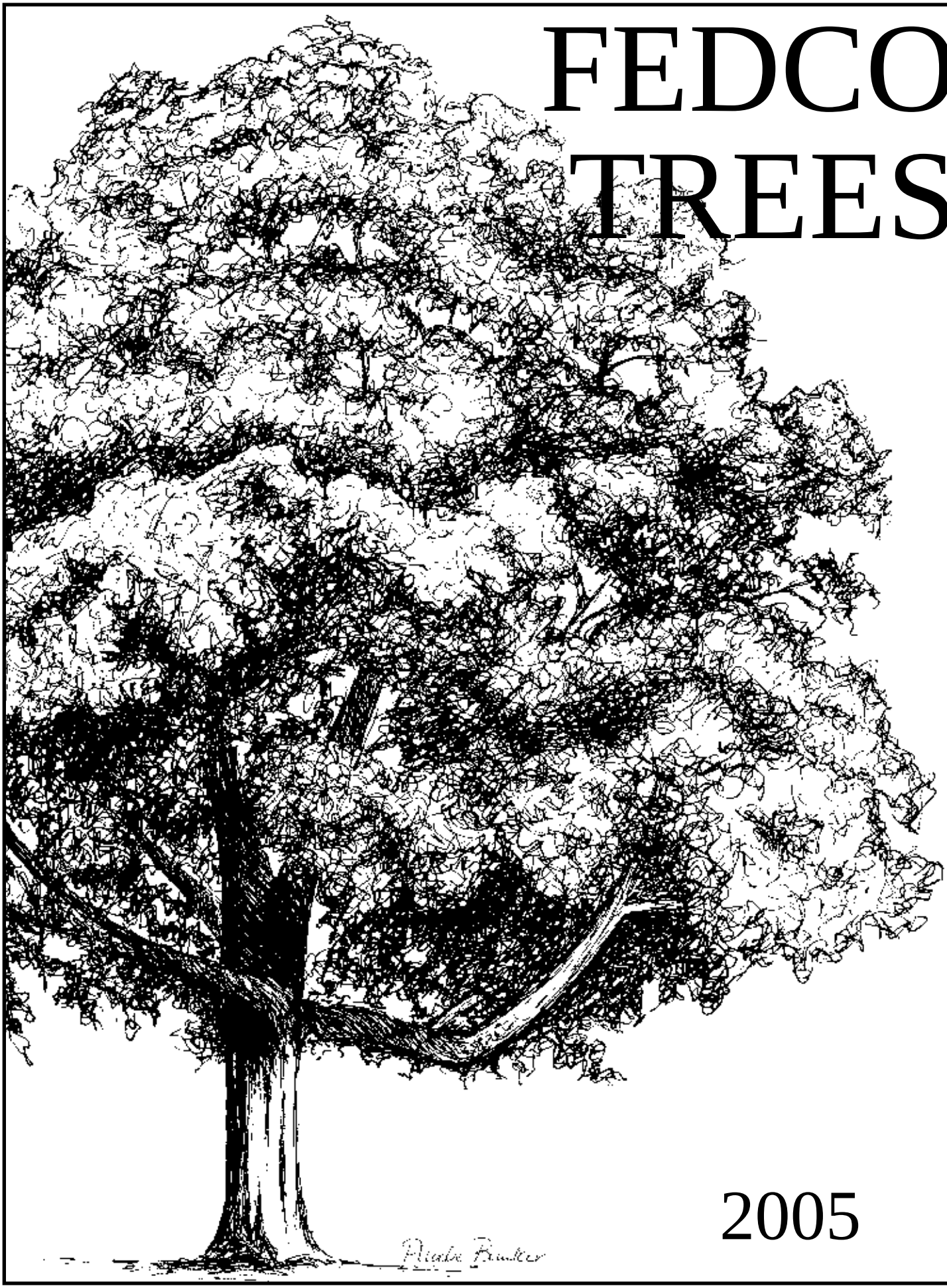
FEDCO TREES



2005

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We believe in selling small trees with well-developed root systems. A good root system is far more important than a big branched treetop. Small trees are not only less expensive than large trees, but also re-establish themselves with minimal transplant shock and grow quickly and vigorously.

Our stock comes from a few large northern nurseries and about twenty small Maine nurseries in our growers co-op. '**ME Grown**' signifies plants grown by these local growers. Every year these folks produce more of what we sell in the catalog. This year two thirds of our woody plants are being grown by members of the co-op. All the local plants are hand-planted and hand-dug. All are grown with a combination of compost, cover cropping and crop rotation. The largest of these nurseries is three acres; the average is about three-quarters of an acre. In July the growers convene to discuss the past year, trade ideas and growing tricks and brainstorm together to improve what we do for you. As we work to involve more small Maine nurseries, we are increasing our selection of locally grown plants, especially heirloom and hard-to-find selections. If you ask, we'll tell you the origin of a particular item.

FEDCO TREES 2005

Welcome to Fedco Trees' 21st annual order. We encourage people to plant more trees. Diversify your gardens, fields and orchards. We vary our listings every year to increase the choices available and to bring you the hardiest and healthiest plants possible for cold climates. Our no-frills operation and volume discounts help keep plants affordable. Consider ordering in a group with co-workers, friends or neighbors to minimize your costs.

During one of the incessant convention interviews on the radio last summer, I heard some politician declare that everyone's a liberal. Or maybe it was that everyone's a conservative—I can't remember. Either way, I wouldn't have agreed twenty years ago, but now I do. I blame trees for that.

Over the past twenty years, we've sold close to a million trees and shrubs and vines and canes. And who has bought all those plants? For a glimpse of the typical Fedco Trees customer, I highly recommend attending our spring sale some year when you can make it up here.

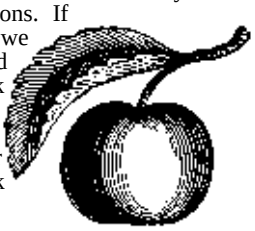
I've been to all twenty and for twenty Tree Sales I've been checking out our customers' footwear. It's a great way to find out who's who. Down in the Fedco basement negotiating their way through the puddles and the wet sawdust to goggle over an oak tree or a grape or a Black Oxford, we've had Adidas and snow packs and Tevas and brogues and rubber boots of pretty much every color and high heels and Red Wings and wing tips and Chuck Taylors and bare feet. Could it be that everyone loves trees?

Yes, please come to our annual Tree Sale in Clinton! Wear your favorite shoes. Along with many of our catalog listings, we bring in many locally grown plants, some rare, some potted, some in quantities too small to list in the catalog. Seeds, organically grown seedlings, seed potatoes, and orchard, farm and garden supplies are also available. The sale is April 29 & 30, for people picking up orders and May 6 & 7 for the general public.

Check out our Web site: **www.fedcoseeds.com**. There is a link to Fedco Trees. New this year are color photos of most of our trees, shrubs and perennials! You will also find a wide range of useful and interesting information. If you have ideas for what we should include, please let us know.

We do special orders. If you wish to buy large quantities of any item, larger or smaller plants than we are listing, rooted cuttings, or unusual items we're not listing, please write with particulars.

Please share your experiences growing plants with us. Many of our selections originated from your suggestions. If you know of something growing near you we should be offering, or if you are interested in growing for us, please write to us. Look for our customer questionnaire on our website. We are part of Fedco Seeds, a consumer/worker cooperative. We welcome your comments, suggestions, and ideas. Thank you for your support.



John Bunker & Susan Kiralis

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Phone 207-873-7333. We answer regularly starting in mid-January.

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We guarantee the quality of our trees and plants, and warrant that all items we offer are fully satisfactory.
If you are dissatisfied for any reason, we will replace the item or refund the purchase price.
Please inspect your order upon receipt and use the correction sheet to notify us immediately of any problems. Because good results depend upon weather, soil and cultural practices over which we have no control, we limit our liability in all instances to the purchase price. The liability of Fedco Seeds, Inc., for breach of warranty, or any loss or damages arising out of the purchase or use of our products, including loss or damages resulting from any negligence whatsoever on our part, or strict liability in tort, shall be limited to the purchase price. By acceptance of the merchandise, the buyer acknowledges that the limitations and disclaimers herein described are conditions of sale, and that they constitute the entire agreement between the parties regarding any warranty or liability. Claims for any defects in Fedco's products should be presented to Fedco as soon as possible after discovery. Failure to assert claims within 30 days after discovery renders this warranty null and void.

Ordering Information—

The order forms - Order items from this catalog on a Trees 2005 order form, in the center of the catalog; you may submit as many pages as you need, either photocopies, forms downloaded from our website or printouts mimicking our format. To encourage you to participate in a group order and to order early, we give discounts.

Payment with check, money order or credit card must accompany all orders. We request that all orders under $25 pay by check or MO. Make your check out to Fedco. We accept Visa and MasterCard and will charge your credit card when we receive your order. We will bill or refund you for any adjustments as each order is completed.

Mail your order to **Fedco Trees, PO Box 520, Waterville, ME 04903-0520.** Keep a copy of your order for your records. To confirm receipt of your order, enclose a stamped self-addressed postcard.

Or **fax** your order to (207) 872-8317. Fax orders pay a $2 handling fee. **We do not take phone orders.**

Group orders: mail us at one time all the order forms from your group members with one payment and we will ship all the orders, packaged individually, to one address. The group total earns the discount. Use the front of an order form for a group address and payment cover sheet. We recommend making a copy of each group member's order before you send the batch to us.

Maine sales tax - for **Maine residents only.** Please add 5% sales tax. State law does not exempt shrubs, trees, seedlings or plants, even those producing food.

We charge **$10 for handling if you adjust your order**. Additions, deletions and cancellations are costly for us to process. You are welcome to place as many separate orders as you wish.

We will offer surplus for sale at the Tree Sale. Sometimes we have stock left over after the Tree Sale, but never after May 15th, when we shut down completely and go home to plant.

Our Planting Guide
is incorporated into the catalog. **Save your catalog** for planting and cultural instructions. We will not send planting guides with orders unless you request them.

Our Variety Descriptions–

All trees and plants are bare-rooted (except where noted), and even a large order can fit into a station wagon. All fruit and nut trees are well-rooted, 1/4-7/8" in diameter.

Fruit trees are grafted onto the hardiest standard-sized rootstocks available, except where noted. Standard trees are stronger rooted, hardier, and longer lived than dwarf or semi-dwarf trees. If you want a smaller tree, keep it pruned.

For fruit trees and berries, the **exact dates of peak ripeness** will vary from place to place.

The **zone hardiness rating** will aid you in determining whether a plant will be hardy for you. The average minimum temperature in your area determines your zone. See the chart below. Apple descriptions have minimum *and* maximum zones because apples typically need cold climates to produce the best fruit. Your own soil conditions, micro-climate and topography will be equally important in determining the best varieties for you.

Please note **pollination** requirements for fruits, nuts and berries. Some plants are self-pollinating, others require a second plant for pollination, and others require a plant of a second variety.

We strive to give you accurate information about all the plants we sell. If you notice inaccuracies, please let us know.

John writes the tree and shrub descriptions and Susan writes tender bulb and perennial descriptions.

Statements about medicinal uses of plants have not been evaluated by the FDA, and should not be used for the diagnosis, treatment, cure or prevention of any ailment. Before using or ingesting any medicinal plant, consult a healthcare practitioner familiar with botanical medicine.

USDA Hardiness Zone	Average Minimum Temperature
2	-50˚ to -40˚
3	-40˚ to -30˚
4	-30˚ to -20˚
5	-20˚ to -10˚
6	-10˚ to 0˚

Discounts & Deadlines—

Discount deadline is **Friday, December 10, 2004**. Sorry, no volume discounts on later orders. Discounts apply only to orders shipped to one address.

over $200	10% discount
over $400	15% discount

Special discounts may be available for very large orders; please call (207) 873-7333 for a quote.

We fill all orders on a first-come first-served basis.

Final order deadline is **March 4, 2005.**

Shipping & Pickup—

We ship most orders **via UPS beginning in April**, and continue for about 10 days, timed according to planting zone. Our last regular ship date is around April 18. We will have a special late ship date around May 5. We do not ship at other times.

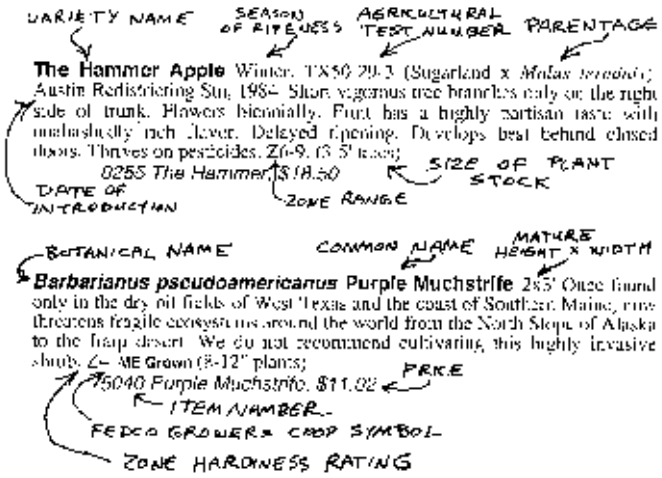
Shipping charges: All orders to be shipped pay a $4 box charge in addition to shipping. Shipping is 10% with the following minimums.

area	minimum charge
New England	$7.00
NY, NJ and PA	$9.00
all other states	$14.00

We ship to Alaska via Priority Mail; include 20% for shipping (minimum $14) and supply a postal address.

If you require a particular ship date during our regular shipping time or for shipment around May 5 **we charge $10** to cover our extra handling costs.

Pick your order up at our warehouse in Clinton, Maine, during our annual **Tree Sale**. Fri and Sat, April 29–30, are reserved for preorder customers. The public is welcome on Friday and Saturday, May 6–7. Sale times are 9:00 am–3:00 pm each day. We recommend that preorder customers come on April 29 or 30, shop at the full Tree Sale and avoid the crowds. We will send you a pickup reminder and map in April. You may pay a 50% deposit, with the balance due at pickup.


VARIETY NAME
SEASON OF RIPENESS
AGRICULTURAL TEST NUMBER
PARENTAGE
The Hammer Apple Winter. TX50 29-3 (Sugarland x Malus sieversii) Austin Redistricting Stn, 1984 Short vigorous tree branches only on the right side of trunk. Flowers biennially. Fruit has a highly tartisan taste with unabashedly rich flavor. Delayed ripening. Develops best behind closed doors. Thrives on pesticides. Z6-9. (3-5' trees)
0255 The Hammer $18.50
SIZE OF PLANT STOCK
DATE OF INTRODUCTION
ZONE RANGE
BOTANICAL NAME
COMMON NAME
MATURE HEIGHT x WIDTH
Barbarianus pseudoamericanus Purple Muchstrife 2x5' Once found only in the dry oil fields of West Texas and the coast of Southeast Maine, now threatens fragile ecosystems around the world from the North Slope of Alaska to the Iraqi desert. We do not recommend cultivating this highly invasive shrub. (- ME Grown (8-12" plants)
5040 Purple Muchstrife. $11.02
PRICE
ITEM NUMBER
FEDCO GROWERS CROP SYMBOL
ZONE HARDINESS RATING

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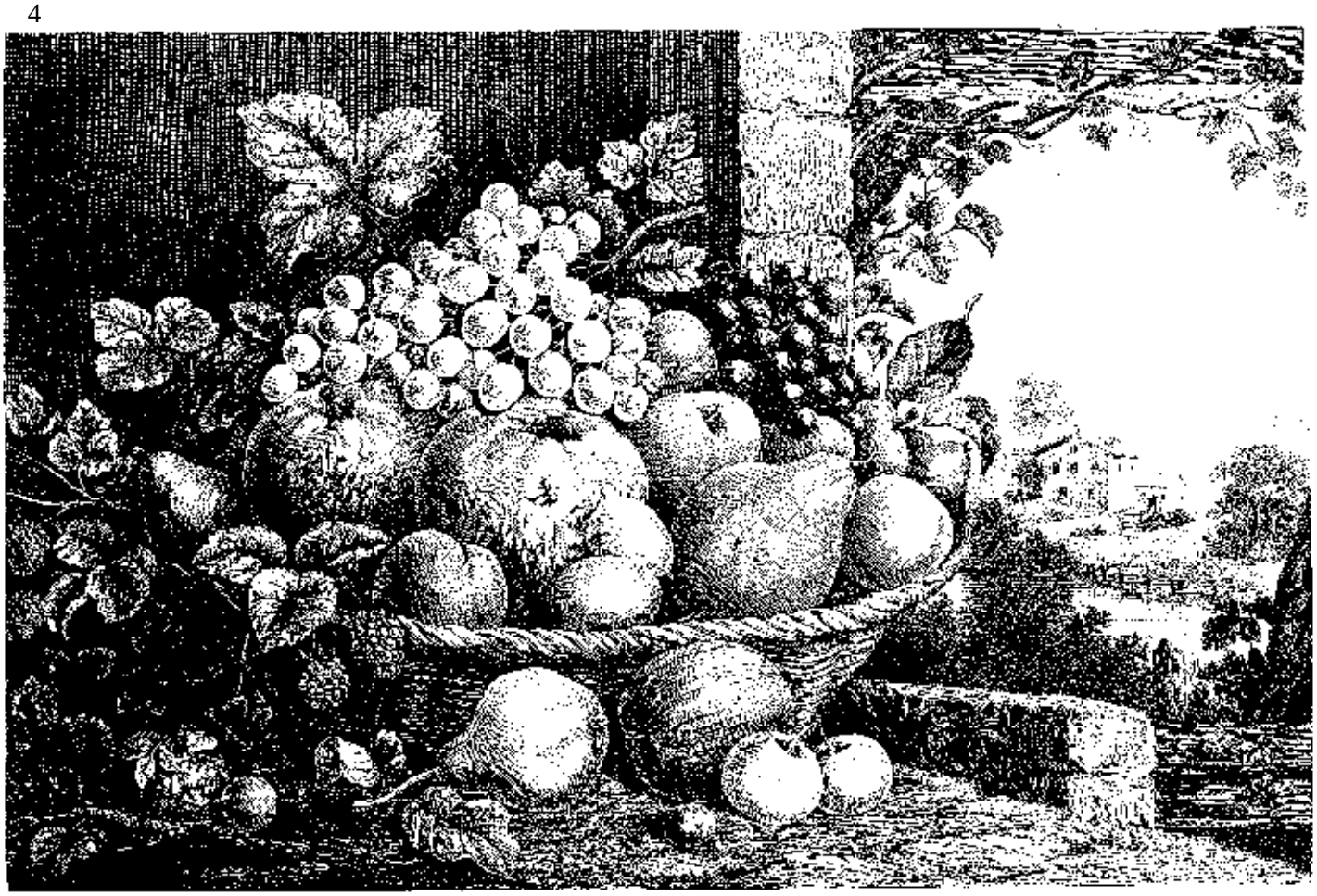
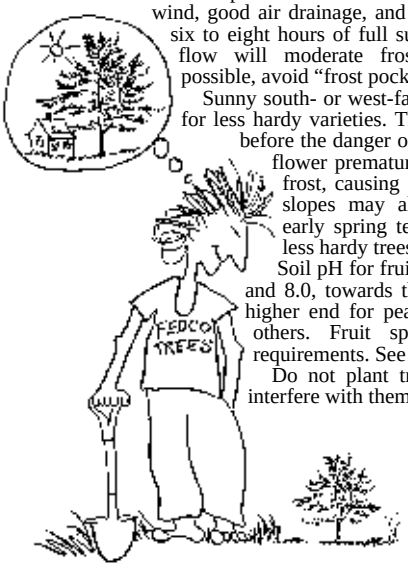


FRUIT TREES AND BERRIES

Choosing a Site for Fruit Trees and Berries

The best sites for fruit crops have well-drained fertile soils, protection from wind, good air drainage, and full sun. A gentle slope and six to eight hours of full sun per day is ideal. Good air flow will moderate frosts and fungal disease. If possible, avoid "frost pockets."



Sunny south- or west-facing slopes are not advisable for less hardy varieties. These slopes tend to warm up before the danger of frost has passed. Trees may flower prematurely and then be damaged by frost, causing loss of fruit. South and west slopes may also have widely fluctuating early spring temperatures that can damage less hardy trees.

Soil pH for fruit trees should be between 5.5 and 8.0, towards the lower end for apples, the higher end for peaches, and in the middle for others. Fruit species have optimal space requirements. See chart on page 7.

Do not plant trees where power lines will interfere with them.

Magnetic Alignment

Orchardist Michael Phillips writes, "Here's one tip from an old-time South Carolina peach grower: Nursery stock when barerooted for planting shows a definite dominant lateral root. Supposedly this root grew in response to the magnetic field of the earth. Trees planted out in the orchard with this dominant root aligned towards the magnetic pole will assure the tree continues to grow in alignment with the sun the same way it did in the nursery. This fellow swore such planted trees took off far, far better."

Fall Preparation or Spring Initial Feeding for Fruit Trees

If you're interested in preparing locations for your trees this fall, or for feeding newly planted fruit trees, the following amendment recipe should address most sites in the eastern U.S., which tend to be acidic, and moderate to low in calcium and phosphorus. You can apply this mix as a mulch to your newly planted tree in the spring. To order any of these products, refer to the Organic Growers Supply section of our Seed catalog.

Deluxe Method

Without digging the hole, cover an area 4-6' in diameter with:

- 5 lbs aragonite (long-term calcium)
- 5 lbs colloidal phosphate (short-term calcium and phosphorus)
- 5 lbs azomite (long-term minerals and trace minerals)
- 5 lbs granite meal or greensand (for improved soil texture)
- 2-3 lbs menafee humates (aids mineral and rock-powder breakdown)
- 2-3 lbs greenstone (aids plants in nutrient uptake)

For building high levels of humus, also add:

- 2 lbs alfalfa meal
- 2 lbs bone meal
- 2 lbs kelp meal
- 2 lbs blood meal
- 100 lbs compost (1/8 yard)
- BioDynamic preps (optional)

Cover with a 3-4" mulch of lawn clippings, leaves or "brush" chips, which will smother the sod, conserve moisture, prevent leaching, and provide a habitat for soil organisms to break down the recipe. In the spring, pull back the mulch and dig your tree hole, incorporating the mineral supplements and compost into the backfill.

Simpler Method

Forgo the soil amendments and simply pile 1-2 wheelbarrow loads of compost on each planting-hole site. If you live by the ocean, add a couple of wheelbarrows of seaweed. Then cover with mulch. In the spring, pull back the mulch and plant your tree, incorporating the compost into the hole as you dig.

Feeding older fruit trees

Cover the surface of the ground out to the drip line with the same materials listed above. For larger trees (five years and older) increase the mineral amount to 10-15 pounds each. For ancient trees you can add up to 25 lbs of each mineral in a ring beneath the drip line. Mulch as described above.

TREE PLANTING AND CARE

The basics of tree care are outlined here and are designed to get you going. Obviously we can't tell you everything you need to know in a few pages. Additional information, such as location and soil preferences, about specific plants is in the item descriptions. Reading, observation, trial and error, and talking with other growers and extension agents can expand your knowledge of trees and shrubs. A soil test is useful in determining the specific needs of your site.

Consult the Fedco Seeds catalog book list for some recommended reference books, or look for information on the internet. There are many useful links at our website, www.fedcoseeds.com.

Immediate Care

When your new trees and plants arrive they are breaking dormancy and need to be planted as soon as possible. The longer they remain unplanted, the more stressed they become and the longer their recovery will take.

DO NOT ALLOW ROOTS TO DRY OUT AT ALL!!!

If You Intend To Plant Trees & Shrubs Within 48 Hours

Leave the plastic wrapping around the root ball. Add some water to remoisten the packing material and store your trees/plants in a cool shaded place like a shed, barn or cellar. Avoid heat and sunlight.

If You Cannot Plant Your Trees Within 48 Hours

You may keep plants for a week or two by following one of two temporary measures and continuing to water trees when they need it.

1) Remove the plastic wrap around the root ball. Store plants in a cool shaded place. Wrap the roots in wet shredded newspaper or sawdust, packing firmly to eliminate air pockets. Water thoroughly.

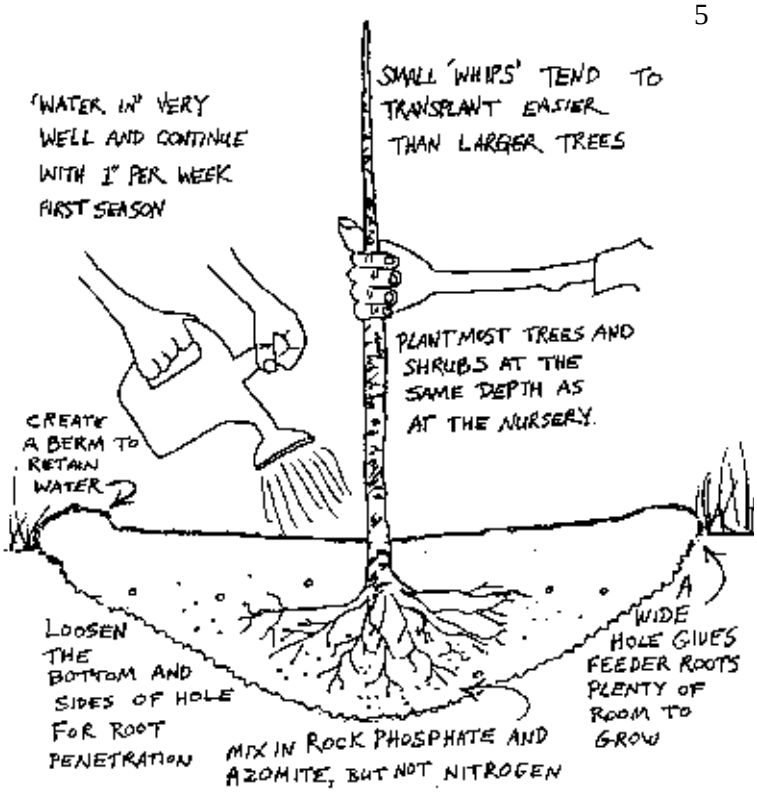
2) "Heel in" your plants. Dig a trench or turn back an appropriate amount of earth and bury roots; tamp firmly to remove air pockets. Water thoroughly.

Asparagus

Open up asparagus roots and store dry and uncovered in a cool shaded place.

Strawberries

Refrigerate strawberry plants until you are ready to plant them.


'WATER IN' VERY WELL AND CONTINUE WITH 1" PER WEEK FIRST SEASON
SMALL 'WHIPS' TEND TO TRANSPLANT EASIER THAN LARGER TREES
PLANT MOST TREES AND SHRUBS AT THE SAME DEPTH AS AT THE NURSERY.
CREATE A BERM TO RETAIN WATER
LOOSEN THE BOTTOM AND SIDES OF HOLE FOR ROOT PENETRATION
MIX IN ROCK PHOSPHATE AND AZOMITE, BUT NOT NITROGEN
A WIDE HOLE GIVES FEEDER ROOTS PLENTY OF ROOM TO GROW

Perennials

Open bags and check the stock immediately. Roots and crowns should be firm and pliable, not squishy or brittle. If they are slightly dry, add a little water or, if they are going to be potted up soon, soak the roots. Generally, a little surface mold is harmless and will not affect the plant's future performance. If you cannot pot them up immediately, store them in a cool (35-40˚) location for a short time. See page 47 for details.

Sweating Nursery Stock

Some trees and shrubs become extremely dormant during refrigerated storage. These include: Amelanchier (juneberry), Betula (birch), Celtis (hackberry), Cercis (redbud), Crataegus (hawthorne), Morus (mulberry), Quercus (oak), and Potentilla (cinquefoil).

Sweating nursery stock ensures breaking of dormancy. The easiest way to force any tree to break bud is to pot it and set it in a greenhouse or polyhouse. After the tree begins to leaf out, transplant it outdoors. If you don't have a greenhouse, lay the trees in a shady place, 45-70˚, such as a garage, basement, barn, greenhouse, or outdoors in the shade. Cover the whole plant with very damp packing material (hay, newspaper, etc.) followed by a sheet of plastic. Sweating will take several days; check the buds every day. The trees are ready to plant when the buds begin to swell.

Warm May weather will give the best results. Until then, heel your trees in, or store them with roots covered in a cool barn or garage.

General Planting Directions for Trees and Shrubs

Dig a large hole, at least twice as wide and about as deep as the root system. Most roots grow laterally and need plenty of room to spread out. Your trees will benefit if the hole is at least 3' wide. Loosen up the soil at the bottom of the hole and especially around the sides. For fruit trees, you may add a 3-pound bag of our planting mix, or well-aged compost and mineral fertilizers such as rock phosphate, but not manure or other nitrogen sources. We add about a coffee-can of rock phosphate for each fruit tree. You may also add a handful of azomite at this time. Replace the topsoil around the roots where it will do the most good. If you situate non-fruit trees according to their requirements, there is no need to add any supplements to your soil. This is the best way to ensure that your plants will thrive for many years.

For best results plant on cool cloudy days in the early morning or late afternoon. Soak deciduous trees and shrubs for up to 24 hours before planting. Keep the roots from drying out. Even a few minutes in the sun and breeze can kill a tree or shrub. Keep them in a bucket of water as you plant.

Generally you should plant trees and shrubs at the same depth that they grew in the nursery. Plant semi-dwarf or dwarf fruit trees with the graft 2" above ground level. Spread the roots out as you set the trees in the holes. Make a mound at the bottom of the hole over which to spread the roots. Give your trees plenty of water to "puddle in" as you plant. Wiggle the trunk as the water seeps in to ensure that the roots are settled in with no air pockets. Leave a berm around each tree so that water will seep in and not run off. Keep them well watered throughout the first summer. They will require the equivalent of 1-2" rain per week. A good soaking is effective; sprinkling is not.

Initial Pruning

Prune dead or injured branches and roots on all trees and shrubs. Further pruning of most trees is not necessary at planting time. Do not prune tops or prune or bend tap roots of nut trees. Specific preplanting pruning requirements for small fruits and some ornamentals is noted in their respective sections and more general information on pruning begins on p. 36. Conifers (pp. 29-30) and roses (pp. 40-41) require special pruning. See their sections for details.

Pruning Fruit Trees

Avoid pruning young trees except to establish a basic shape. Pruning young trees delays bearing. On apple and pear trees, leave the central leader alone and let it grow. It's ok to cut off extra trunks and large branches. On peaches and plums, the trees may want to develop 2-4 leaders, or an open-vase shape. Always prune just above a good strong bud that faces a direction you'd like your plant to grow.

Once the tree begins to bear you will want to prune annually. Good pruning brings sunlight to all parts of your tree. Maximum sunlight encourages more and higher-quality fruit. Sunlight also encourages fruit buds to form for next year's crop. A well-pruned tree will produce larger fruit and will tend toward more annual bearing. Good pruning discourages fungal diseases and promotes greater spray penetration. There's an old saying that a bird should be able to fly through your fruit tree. Any good book on growing fruit trees will provide you the information you need. Pruning is not difficult to do and will make a huge difference.

Most pruning should be done in late winter or early spring, although some say the best time to prune is when you have your clippers in your hand. We recommend a good-quality pair of hand shears and a lightweight pruning saw. You may also wish to invest in long-handled loppers, a pole pruner or a pole saw. Keep your pruning tools sharp for smooth, clean cuts.

Consult old and new books as well as orcharding articles and develop a system that works for you.

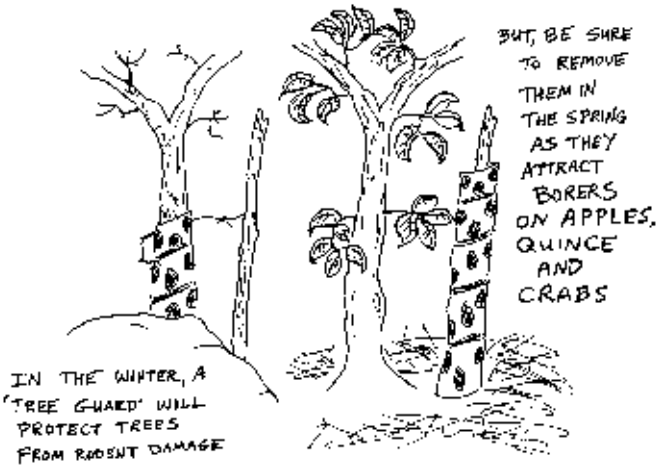
Weeping crabapples require special pruning. See p. 35 for instuctions.

Mulch

Keep weeds and especially grass away from new trees and shrubs. Apply a 2-4" mulch of composted material, leaves, wood chips or hay out as far as the drip line. A 1/2-1" topdressing of alfalfa meal beneath the mulch may substantially reduce transplant shock. Keep mulch back several inches from the tree trunks. We lay down cardboard or newspaper and spread mulch on top of it. Mulch encourages earthworms, holds moisture, keeps down weeds, insulates against excess heat and cold, aerates and loosens soils, builds humus and fertilizes feeder roots, 90% of which are within 6" of the surface.

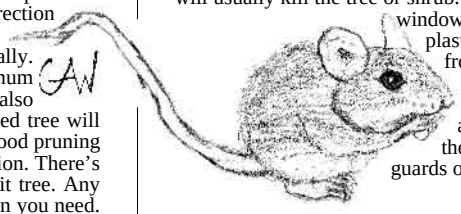
Staking

Newly planted standard-sized fruit trees and ornamental trees seldom need staking. Dwarf trees require staking. Semi-dwarfs may require staking. If your tree is in a very windy site or develops a leaning habit, staking may help. Drive a stout post near the tree. Wrap the tree trunk with a scrap of burlap or rubber to protect against abrasion. Secure the wrapped part of the tree to the post with string or wire. Tie tree somewhat loosely, as a slight rocking motion will encourage rooting. Once roots are well anchored, the stake may not be needed. Mark small trees with a stake with ribbons to warn operators of lawn mowers, tractors, cars and skidders.


BUT, BE SURE TO REMOVE THEM IN THE SPRING AS THEY ATTRACT BORERS ON APPLES, QUINCE AND CRABS
IN THE WINTER, A 'TREE GUARD' WILL PROTECT TREES FROM RODENT DAMAGE

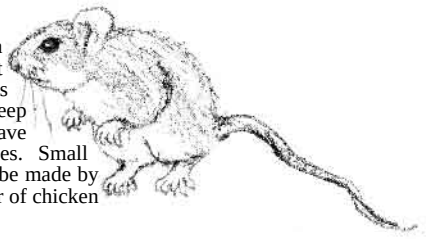
Mouse/Vole Protection

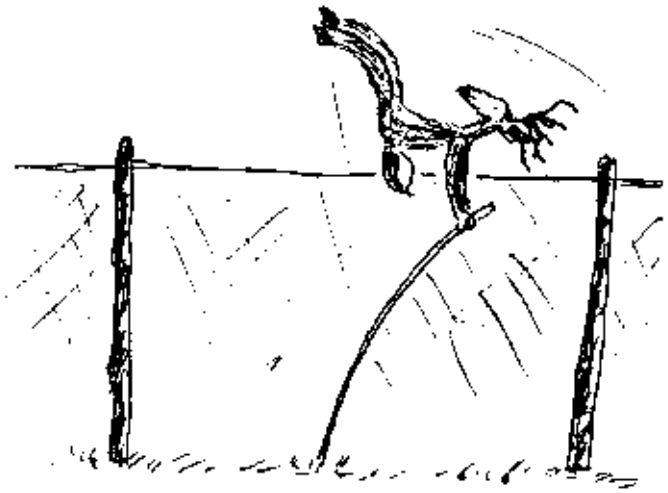
Fruit trees and ornamentals are sometimes girdled by mice or voles. Girdling will usually kill the tree or shrub. The danger is greatest in winter. A wrap of window screening (Screen Saver, next page) or a plastic spiral tree guard will protect your tree from being girdled. If you use plastic spiral tree guards on apple, quince or crabapple trees, remove them from April to October, as they attract borers if left on the tree in the summer. You can leave plastic spiral tree guards on most other trees year-round.

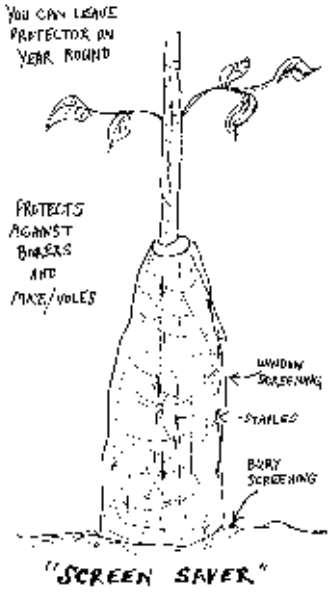


Oh Dear, Deer!

The best deer protection is a collie in the yard. If you don't have a dog or if your orchard is too far from the house, an 8' sheep fence will work. Some people have good luck with electric fences. Small protective fence enclosures can be made by circling your tree with a cylinder of chicken wire or other fencing.







Beware of the Apple Borer ! Try a Screen Saver !

In most locations the Roundheaded Appletree Borer (*Saperda candida*) is **the number one enemy** of young **apple**, **crabapple** and **quince** trees. If you are growing young apple trees, you must protect your trees from this pest. If you don't know if they are a problem in your area, check with any grower near you. They'll know. Otherwise, err on the side of caution. The borer does not endanger other fruit trees or ornamentals.

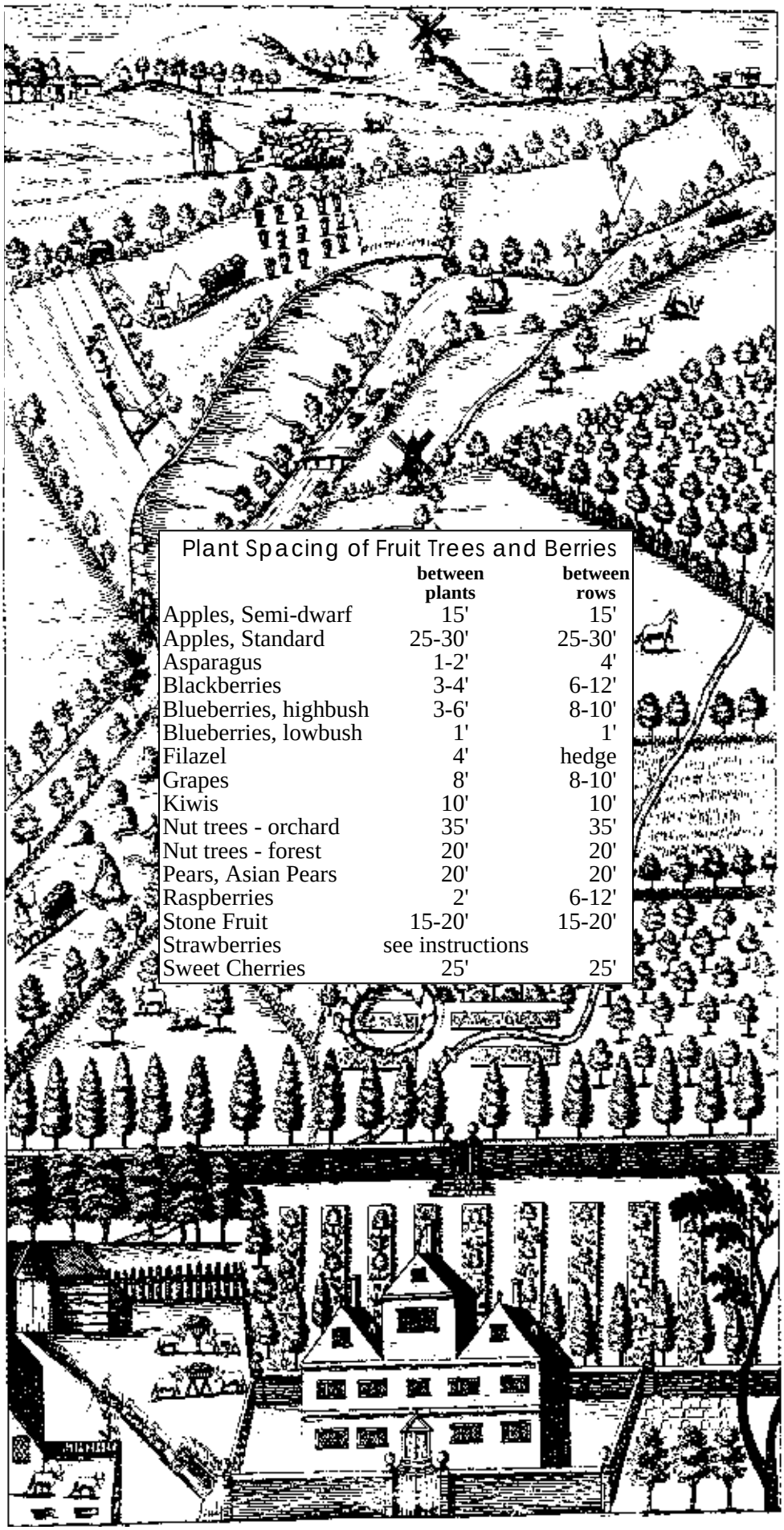
The borer beetle lays its eggs under the bark near the base of the tree. The developing larvae tunnel through the wood, eventually weakening the tree until it crumbles and falls over. The trouble sign is small deposits of orange sawdust, called frass, at the base of the tree, usually appearing in June or July. Left unchecked, borers usually mean death for your trees.

Borers thrive in shady moist warm environments. Keep grass back at least 6" from the tree base. One good borer deterrent is a homemade protector. Wrap window screening around the tree trunk. You may add a soft foam collar "gasket" at the top, to prevent the adult borer beetle from sneaking down behind the screen to lay eggs. Staple the screening snug at the top and along the seam or tie it with wire. Push the screening 1-2" down into the soil. (Optional: Smear Tangletrap on the gasket to increase the deterrent.) Be sure to loosen the screening as the tree grows. Because borers occasionally sting the tree *through* the screen where it touches the trunk, you should remove screen once a summer and look for signs of infestation. With this "screen saver" you should never have a borer problem.

You may leave this screening on your tree year round. Every so often adjust the top to be snug but not girdling your tree, and fasten the seam so borers will not enter through the side.

Borers are most prevalent in June and July. If you do not have screen savers, look for the frass, the sawdust. Locate the hole or soft spot in the trunk and insert a wire until you locate and kill the larvae. Cut away soft, spongy pockets with your knife. Even serious carving is less harmful to the tree than leaving the larvae alive inside.

Another option is to paint the tree trunk from the ground up to about 30" with white interior latex paint. Thin the paint to about 3/4 strength. Then, if available, add hydrated lime and kaolin clay (or Surround) to thicken the paint to about the original consistency. This mix will help deter borers. It will also make for easy detection of any infestation you may have. Look for the frass!



Plant Spacing of Fruit Trees and Berries

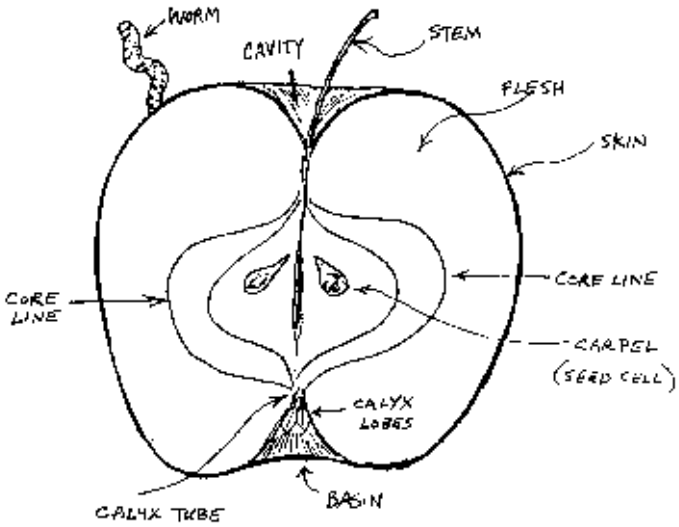
	between plants	between rows
Apples, Semi-dwarf	15'	15'
Apples, Standard	25-30'	25-30'
Asparagus	1-2'	4'
Blackberries	3-4'	6-12'
Blueberries, highbush	3-6'	8-10'
Blueberries, lowbush	1'	1'
Filazel	4'	hedge
Grapes	8'	8-10'
Kiwis	10'	10'
Nut trees - orchard	35'	35'
Nut trees - forest	20'	20'
Pears, Asian Pears	20'	20'
Raspberries	2'	6-12'
Stone Fruit	15-20'	15-20'
Strawberries	see instructions	
Sweet Cherries	25'	25'

Item	Name	Zones	Suitable for Coldest Spots	Season	Uses	Best apples for: All-Around	Fall Eating	Storage	Cooking	Pies	High Flavor	Cider
35	Baldwin	4–6		winter	all purpose	●		●	●	●		●
43	Belle De Boskoop	4–6		fall	cooking			●	●	●		
45	Ben Davis	4–7		winter	all purpose			●				
50	Black Oxford	4–5		winter	all purpose	●		●	●	●	●	●
68	Briggs Auburn	4–6		winter	all purpose	●	●	●	●	●		●
75	Burgundy	3–5	●	fall	all purpose				●			
97	Charette	3–4	●	fall	all purpose	●	●					
110	Cortland	4–5		fall	all purpose	●	●					
115	Cox's Orange Pippin	4–6		fall	dessert		●				●	●
134	Duchess of Oldenburg	3–4	●	summer	all purpose	●			●	●		
140	Dudley Winter	3–4	●	fall	all purpose	●	●		●	●		
180	Fallawater	4–7		winter	all purpose	●		●	●	●		●
207	Fletcher Sweet	4–6		fall	unknown							
229	Garden Royal	4–6		summer	dessert		●				●	
240	Golden Russet	4–6		winter	all purpose			●				●
264	Gray Pearmain	4–6		fall	all purpose	●	●		●			●
293	Hayford Sweet	3–4	●	fall	cooking							
327	Honeycrisp	3–4	●	winter	dessert		●	●				●
330	Honeygold	3–4	●	winter	all purpose	●		●	●			●
360	Isaac Newton's Tree	5–8		fall	cooking				●			
392	Judy	4–6		summer	unknown							
395	Kavanagh	4–6		summer	cooking				●			
436	Liberty	4–6		fall	dessert		●					●
478	McIntosh	4–5		fall	all purpose	●	●		●			
491	Milden	3–5		winter	all purpose	●	●		●	●		
492	Milo Gibson	4–7		fall	dessert		●				●	
520	Newtown Spitzenburg	5–7		fall	dessert		●				●	
545	Northern Spy	4–6		winter	all purpose	●		●	●	●		●
583	Opalescent	4–6		fall	dessert		●				●	
627	Priscilla	4–7		fall	all purpose	●	●					
672	Red Gravenstein	4–8		summer	all purpose	●	●		●	●		
677	Red St. Lawrence	3–5		fall	all purpose	●	●		●	●		
699	Reinette Simarenko	4–7		winter	dessert			●			●	
720	Roxbury Russet	4–6		winter	all purpose			●			●	●
732	Scott's Winter	3–5		winter	cooking			●	●	●		
757	Starkey	4–5		fall	dessert		●	●			●	
763	Stowe	3–4	●	fall	all purpose	●						
767	Summer Sweet	4–6		summer	cooking				●			
769	Sutton	5–7		winter	dessert		●	●			●	
777	Sweet 16	3–6	●	fall	dessert		●				●	
800	Tolman Sweet	4–6		fall	all purpose	●			●			
820	Tumanga	4–6		fall	dessert		●				●	
837	Vermont Gold	4–6		fall	dessert		●					
846	Wally Polley	3–4	●	fall	all purpose		●		●			
865	Wealthy	3–4	●	fall	all purpose	●	●		●	●		
875	Westfield Seek-No-Further	4–6		winter	dessert		●	●			●	
885	Williams Pride	4–7		summer	dessert							
905	Winthrop Greening	4–6		fall	all purpose	●	●		●			
915	Wolf River	3–5	●	fall	cooking				●	●		

Apples

Malus spp. Some definitions: **Summer apples** ripen in summer, are crisp only for a short period, do not store well, and are best used for cooking. **Fall apples** store longer and are useful for a wide variety of purposes. **Winter apples** ripen mid to late fall, store well, and reach their best flavor after weeks, or even months, of storage. **Dessert apples** are delicious eaten raw. **Subacid** means tart! **Russet** or **russeting** is a skin texture (fairly common on apple varieties and characteristic of a few pears and potatoes) which looks and feels somewhat like suede. **Bloom** is a naturally occurring dust-like film on the skin of some varieties of apples, plums and grapes.

Each variety has a **climate range** where it will thrive and produce its best fruit. At the end of each apple and crabapple description you'll find a range of zones listed. For example, Z3-4 signifies that this apple will reach perfection in Zones 3 and 4 and that we don't recommend it farther south even though it would be plenty hardy. Z4-6 means that this apple will reach perfection in Zones 4, 5 or 6. We suggest that you use this guide to select apple varieties most appropriate to your area.



Choosing a variety: not every variety is right for you. It's not just about what tastes good. They all taste good to someone. It's a case of "different strokes for different folks." **All-purpose** apples are just that. They are good for a bunch of jobs. If I were planting just one tree, I'd start there. However if you're a history buff, consider the historical varieties and maybe plant one that originated nearby. If you don't eat many apples but are into making pies, go for the pie apples. If you're a dessert connoisseur, skip all the others and go for the highly flavored dessert varieties. Some are strictly for cider. Some are great to put out at the camp for summer use. Some are perfect for those who want fall fruit but don't have winter storage facilities. Others keep all winter and into the following summer. Read over the descriptions and check out the new chart on the left. If you have a question about a specific variety, drop me an email. I'll try to help!

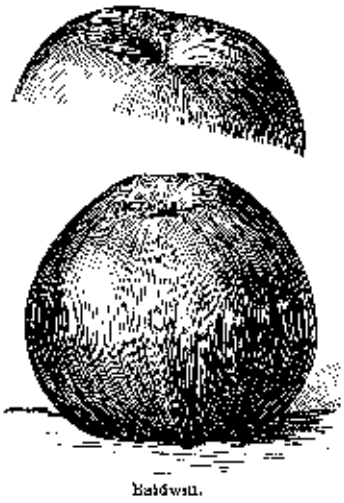
Some people wonder **why we graft our apples onto Antanovka standard rootstock**. This past winter provided an explanation. All over Maine and other parts of the northeast, thousands of apple trees died or were highly stressed and may never recover. Some commercial orchards in Maine have no marketable crop at all this fall. As far as I know, all the affected trees were grafted onto dwarf or semi-dwarf rootstocks. None were on standard. This past January, following a warm and wet December, we sustained minus twenty degree temperatures for nearly two weeks with little or no snow on the ground. The result was significant root damage on many plants, especially dwarf fruit trees. In my orchard where all the trees are standards, there was no damage at all. Standard trees have deep, substantial—and therefore hardier—root systems. By selecting the varieties appropriate to your district, grafted on standard rootstock, you may well be planting a tree that will be picked by your grandchildren's grandchildren. Standard trees will grow to be large, but you can keep them trimmed. My largest trees are now about 25 years old. The tallest are still well under twenty feet.

Although standard-sized apple trees may be planted as close as 10-15' apart, they were typically planted 30' apart in 19th century orchards. We generally plant trees 20-25' apart with good results.

Apple trees are adaptable to a variety of soils and climates, though they prefer well-drained fertile soil. See pages 4-5 for information on soil preparation and planting. Varieties bearing annually are noted; others normally bear every other year. **All apple trees require a second variety for pollination**, but any apple within a quarter mile will probably do. (3½-6' trees)

ME Grown = grown in Maine by a member of the Fedco growers coop

Baldwin Winter. Wilmington, MA, about 1740. Also called **Butters Apple** or **Woodpecker**. Discovered on the Butters Farm by a surveyor planning the Middlesex Canal and noted as a favorite site for local woodpeckers. Scions from the original tree were grafted and growing in Maine by 1810, and by 1850 Baldwin was the standard all-purpose home and commercial variety wherever it was grown. It remained dominant in Maine until the terrible winter of 1934 when tens of thousands of trees perished and McIntosh became king. Large round-conic thick-skinned fruit. Light yellow skin almost entirely blushed, mottled and striped with red and deep carmine. Hard crisp juicy yellowish flesh makes excellent eating and keeps till spring. Vigorous adaptable hugely productive long-lived healthy tree. When grower Dave Gott asked the late renowned entomologist Ron Prokopy his opinion of Baldwin, Ron replied that the apple is "not practical commercially due to biennialism but the *only* apple that is both disease and insect resistant." Hardiest in well-drained upland and north slopes. Massachusetts' most famous apple where it grows to perfection. Also extremely nice here in central Maine. Blooms early. Z4-6. **ME Grown.**

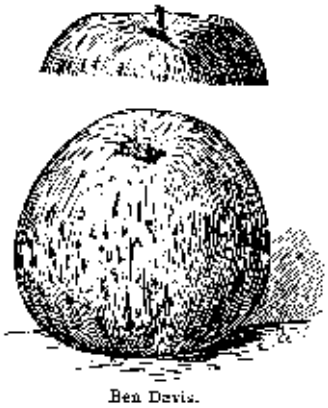


0035 Baldwin, $16.50

Belle de Boskoop Winter. Probably a chance seedling from Holland, 1860. May also be a synonym or mutation of Montfort. Every chef in Europe knows Boskoop. It cooks beautifully. Pronounced 'Bos-ko' in Holland and 'Bos-kup' in Germany, it was the farm apple of Europe. Every back yard had a Boskoop. Large to very large aromatic russet fruit, sometimes with a red blush. *The* cooking apple for pies, compotes and even that pastry dubbed Apple Berliner. Most people would find the fruit too sour or astringent off the tree. However, after several months in storage the acidity softens and it becomes a decent table apple. Keeps well. Robust, strong-growing tree. Blooms early. Triploid, not a pollinator for other varieties. Z4-6. **ME Grown.**

0043 Belle De Boskoop, $16.50

Ben Davis Winter. Unknown parentage. Maine, about 1840. The most important commercial apple in Maine during the late 19th century. Many thousands of bushels were shipped around the world and a great many Mainers made their modest fortunes on this apple. There has been ongoing confusion around its origin. Now it seems the apple originated on the farm of Benjamin Davis of Minot, ME, 160 years ago. If this is correct, it would be Maine's most famous apple. An orchardist's dream tree: annually bearing, easy to grow, perfectly shaped. Large roundish-conic unbelievably beautiful red striped and blushed fruit. It may be the most beautiful apple that ever was. If only beauty weren't skin deep. The fruit is generally dry and tasteless. The flavor's been compared to cork and cardboard. For the sake of science I did try one with salt this past winter. I'd call it a definite improvement, especially if you like salt. Keeps all winter. By March, the fruit is somewhat greasy. We offer it as a service to the Ben Davis die-hards of the world. Enjoy! Z4-7. **ME Grown.**

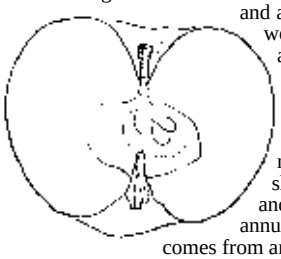


0045 Ben Davis, $16.50

Black Oxford Winter. Unknown parentage. Paris, Oxford County, ME, about 1790. This outstanding apple, a favorite long ago around much of Maine, has been making a huge comeback in the last 20 years. Our best seller. Medium-sized round fruit, deep purple with a blackish bloom. From a distance you might think you'd discovered a huge plum tree. A 200-year-old Black Oxford tree still grows in Hallowell, and still bears large crops. Excellent cooking, superb late cider. Best eating late December to March. Last July I did a taste test of the root cellar remnants. I was pleased to find quite a few Black Oxfords still sweet and edible even after 8 months in the dark. They seem to get sweeter and sweeter as the months go by and I suspect it is that sweetness that keeps them palatable. Good cooking until early summer. Some insect and disease resistance. Becoming less rare every year! Blooms late. Z4-6. **ME Grown.**

0050 Black Oxford, $16.50

Briggs Auburn Fall-Winter. Introduced by John C Briggs of Auburn, ME, before 1850. One of Fedco's recent reintroductions and one of my favorites. Large round-oblate clear-yellow fruit with glowing greenish shading and a slight blush. All-purpose apple with a bright well-balanced flavor including hints of banana and blackberry, and chewy skin. Superior fresh eating well into winter and top-notch cooking. Peel it and it's highly aromatic. Produces a thick creamy golden-yellow medium-sweet apple sauce. No sugar necessary. Excellent in oatmeal. In a pie, the slices lose their shape but the crust won't sink and pie doesn't get watery. Medium-large annually bearing productive tree. Our scionwood comes from an old orchard near Belfast. Z4-6. **ME Grown.**

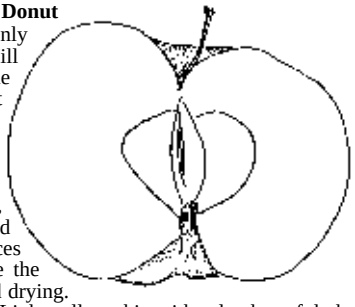


0068 Briggs Auburn, $16.50

Burgundy Fall. NY 161 [Monroe x NY 18491 (Macoun x Antanovka)]. NY Station, 1974. Northern Aroostook County fruit growers Steve and Barb Miller introduced Burgundy to us. It's Barb's favorite cooking apple. Striking for its large (3") size and glossy purplish-red roundish fruit. Steve's comment: "It reaches out and grabs you!" Waves and rays of red in firm juicy flesh. Strong distinctive aroma and a pleasantly unique flavor with a tart zingy aftertaste. Taste test comment: "Wow, hey, that's really different!" Makes an aromatic, well-balanced early cider. Bears annually, and hangs on the tree for extended picking. Stores about two months. Blooms late. Z3-5. **ME Grown.**

0075 Burgundy, $16.50

Charette Fall. Also called **The Donut Apple**. Unknown parentage. The only known mature tree is on Charette Hill in Fort Kent, Aroostook County. The massive tree, thought to be about 200 years old, is still pumping out large crops. The oblate apples are huge ($3^3/_4$"+) and almost always seedless. The blossom end of each fruit is sunken in toward the stem, so much so that when sliced perpendicular to the core, the slices sometimes look like donuts. Hence the name. Excellent for fresh eating and drying. Ripens about the end of September. Light yellow skin with splotches of dark yellow and covered with maroon streaks and a bright red blush. Very unusual variety thought to have been brought south into Maine long ago by French missionaries. Z3-4. **ME Grown.**



0097 Charette, $16.50

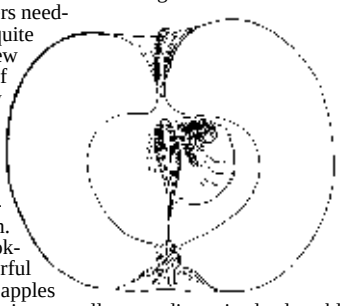
Cortland Fall-Winter. Ben Davis x McIntosh. NY Stn, 1915. A cross between two commercial giants at the time, one (Ben Davis #**0045**) on the way out and the other (McIntosh #**0478**) on the way in. Although never as important as McIntosh, Cortland remains a very popular apple throughout northern New England even in this era of many new introductions. Medium to medium-large slightly ribbed dull red fruit with a purple blush. Excellent eating and cooking. Slow-oxidizing white flesh is very good in salads; fine-grained, crisp, tender, juicy. Vigorous tall upright spreading tree with reddish bark. Annual producer of heavy crops. Bears young; remove fruit for the first year or two to avoid stunting growth. Blooms midseason. Z4-5. **ME Grown.**

0110 Cortland, $16.50

Cox's Orange Pippin Fall. Possibly a seedling of Ribston Pippin. Near Slough, Bucks, England, around 1825. Deservedly one of the most famous of all apples. Not only one of the best eating apples ever but also the parent of many other great varieties, including Tumanga (#**0820**). Medium-sized all-purpose aromatic fruit is red-orange to red with russet striping and wash. Perfectly balanced slightly subacid flavor and crisp juicy tender flesh improve with storage. Moderately vigorous moderately productive tree bears young and annually. Prefers cooler climates and higher pH (6.5-7.5+). Scab resistant. Blooms midseason. Z4-6. **ME Grown.**

0115 Cox's Orange Pippin, $16.50

Duchess of Oldenburg Late Summer. Russia, 17th century. Also called **Duchess**. In 1835 the Massachusetts Horticultural Society imported the first four of many apple varieties to the U.S. from Russia. These were Alexander, Tetofsky, Red Astrichan and Duchess of Oldenburg. Duchess was soon planted extensively wherever growers needed extreme hardiness and is still quite popular in most of northern New England. Thought to be a parent of the famous Canadian variety New Brunswicker and parent of Dudley Winter (#**0140**). Medium-sized round red-striped fruit is irregularly splashed and mottled with crimson. Yellow firm fine-grained crisp tender juicy subacid aromatic flesh. Highly esteemed for all sorts of cooking, makes a pie with a tart flavorful zip; Duchess is one of the best pie apples for coldest districts. Prolific precocious small to medium-sized adaptable tree. Our stock is grafted from Warren Moody's ancient tree in Aroostook County, the highest quality Dutchess we've located to date in our northern exploration trips. Blooms early. We are greatful for the many tours of his orchard Warren gave us over the years and were sad to hear of his passing last winter. Z3-4. **ME Grown.**

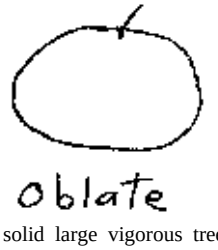


0134 Duchess of Oldenburg, $16.50

Dudley Winter Fall. Duchess x Hyslop Crab. Castle Hill, ME, about 1877. Also called **Dudley** and **North Star**. We had believed it be a New Brunswicker seedling, but David Forbes found information in the 1892 edition of *Agriculture of Maine* that indicates Dudley's true parentage. Orchardist John Wesley Dudley's daughter Grace planted seeds from a Duchess tree pollinated by a Hyslop crab. Many thanks for bringing this to our attention. The resulting seedling became the most widely planted new variety in the North at the turn of the *last* century and probably the most well-known Maine apple outside the state. Medium-sized roundish slightly flattened fruit is vibrant, shiny buttery yellow, overspread with radiating red stripes and splashes. Firm but tender, juicy aromatic subacid flesh for fresh eating and cooking. In northern areas—where it reaches its prime—it also keeps into winter. Small vigorous spreading drooping tree begins bearing young, and crops annually. Our scionwood comes from a small abandoned orchard just north of Castle Hill. Extremely hardy. Blooms early. Natural semi-dwarf. Z3-4. **ME Grown.**

0140 Dudley Winter, $16.50

Fallawater Winter. Unknown parentage. Bucks County, PA, early 19th century. Also called **Winter Blush** or **Tulpehocken.** Distinctive very large blocky fruit—sometimes up to 4"—with pale bluish-green skin and a rusty-pink blush, two distinct and unusual colors impossible to forget. Mildly sweet medium-coarse very juicy flesh. Good eating, terrific in cider, sometimes even a one-apple pie. Best eating late fall into December. Scattered across Maine during the last two centuries. A favorite of two locally renowned aficionados, Mark Fulford and Will Bonsall. Mark introduced me to the apple and Will led me to three gigantic old trees in Oakland where we collected scionwood. Stout solid large vigorous tree. Z4-7. **ME Grown.**



0180 Fallawater, $16.50

ME Grown = grown in Maine by a member of the Fedco growers coop

Fletcher Sweet Early Fall. Unknown parentage. Jonathan Fletcher Farm, Lincolnville, ME, 19th c. Discovered in the fall of 2002 with the help of Lincolnville historians Rosey Gerry and Diane O'Brien. Diane's newspaper article led us to then-79-year-old Lincolnville farmer Clarence Thurlow who took us to the tree, an ancient nearly barkless hulk at the base of what was once Fletcher Mountain (now Moody Mountain) in what was long ago called Fletcher Town. According to Clarence, the fruit is juicy, oblate and light grass green. I returned the following winter and took a short piece of scionwood from the last remaining live branch. We got a few takes and have multiplied the tree from those first grafts. The old tree and Mr. Thurlow both passed on last winter. A young Fletcher Sweet apple however is now safely planted in the Maine Organic Farmers and Gardeners (MOFGA) heritage orchard and we're pleased to be offering it. Z4-6. **ME Grown.**

0207 Fletcher Sweet, $16.50

Garden Royal Late Summer-Early Fall. Unknown parentage. Sudbury, MA, about 1790. Eat one and you'll wonder why it isn't planted in every orchard. Offer it in your catalog and strangers will appear and buy you out. It's an apple with a cult following. With good reason. It may be the best-flavored apple I have ever tasted. Small to medium-sized round-conic fruit is deep red with prominent white dots. AJ Downing, in the 1860 edition of his *Fruits and Fruit Trees of America*, calls it "very tender, juicy, rich, vinous, aromatic, a beautiful and excellent fruit." Once extremely popular because of its exquisite sweet flavor and commonly found in farm orchards, it didn't fit the commercial orchard mold and fell out of favor. Medium-sized moderately vigorous rounded productive tree. Z4-6. **ME Grown.**

0229 Garden Royal, $18.50

Golden Russet Winter. Uncertain origin. Thought to be from England, New York or New England. The champagne of cider apples, ripening late in fall, when the root cellar has finally cooled off and the best cider is ready to be made. Excellent eating; keeps all winter and well into spring. Round medium-sized hard fruit; uniform in size and shape, softens as winter progresses but maintains its superior sweet flavor. Solid deep yellow *golden* russeted skin. Medium to large vigorous diverging upcurving tree with silvery-green leaves on long willowy branches. Scab resistant. Blooms early to midseason. Z4-6. **ME Grown.**

0240 Golden Russet, $18.50

Gray Pearmain Late Fall. Unknown origin. Pear-like juicy and mildly tart dessert apple. Reminds me of Bosc pear. Firm white flesh. Medium-sized oblate obscurely ribbed muffin-shaped fruit. Extremely satisfying apple for fall and winter use. I can eat a lot of them every year. Also produces good juice. The skin is a soft opaque greenish-yellow with a rosy pink blush, a bit of a russet veil, and a greyish bloom. You can pick them late—even after the Spies. Will store reasonably well although they may shivel like Golden Russets. One of the most popular of the many unusual varieties Steve and Marilyn Meyerhans grow at the Apple Farm in Fairfield, ME. There were five or six of the trees in the orchard when they purchased it from Royal Wentworth over 30 years ago. Those trees were already 40 or 50 years old. Unfortunately they never thought to ask the soft-spoken Wentworth about the apple. Its origin may remain a mystery forever. Annually bearing very manageable medium-sized spreading tree. Not hard to grow. Z4-6. **ME Grown.**

0264 Gray Pearmain, $16.50

Hayford Sweet Fall-Winter. Unknown parentage. Maysville, ME, c 1870. Also called **Hartford Sweet** or simply **Hayford**. A popular sweet apple prized long ago in northern Maine where there were very few decent winter apples. Not recommended farther south. Medium-sized blocky barrel-shaped and slightly conic fruit, colored an unusual light creamy opaque yellow, dappled with red-orange flecks, spots, short lines and a fiery blood-red blush. Scattered with brown dots. Fine-grained rich sweet but rather dry flesh. You won't need to worry about the sauce being thin, and no need to add sugar. Its season is from October to January and perhaps even March in Aroostook county. Rediscovered in Presque Isle in 2001 after decades in obscurity with the help of a Fedco *wanted* poster and Steve Miller's exemplary detective work. We rescued the tree just before it was cut down. The distinctive and rather stunning tree was quite large and bushy with uniquely small foliage. Z3-4. **ME Grown.**

0293 Hayford Sweet, $16.50

Honeycrisp Winter. MN 1711 (Honeygold x Macoun). U Minn, 1991. Medium-large fruit, described as "explosively crisp," mottled and striped red over yellow. Cream-colored flesh is sweet and juicy with hard snapping-crisp texture. Mild aroma and subacid flavor are top quality in September and improve steadily in storage. Unusual because it ripens in early fall yet keeps up to seven months. First of the many excellent University of Minnesota introductions to receive large-scale commercial attention, now has a huge following. Probably best planted north of Massachusetts; has not performed as well in warmer districts. Tends towards annual bearing. Relatively small low-vigor upright spreading tree. Above average scab resistance. Blooms mid-late season. Z3-4. **ME Grown.**

0327 Honeycrisp, $16.50

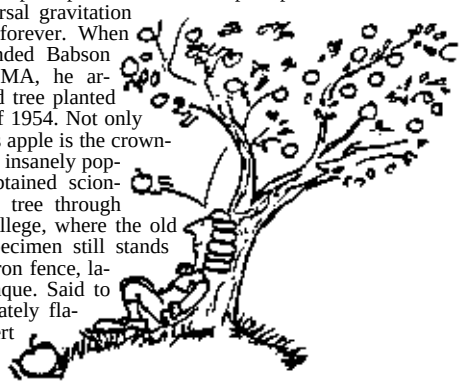
Honeygold Winter. MN 1595 (Golden Delicious x Haralson). U Minn, 1970. A Golden Delicious for the north. Large round-to-conic golden-yellow bronze-blushed aromatic fruit has crisp and juicy yellow flesh with high-flavored "Golden Delicious" quality. Sometimes the flavor reminds me of a pear. Has a very nice zing to it. Aroostook growers Steve and Barb Miller consider it their best all-purpose winter apple. Harvest in October. Keeps all winter. The late apple champion Eddie Dupont of Mattawamkeag introduced us to Honeygold and generously provided us with grafting wood from his favorite tree. Medium-sized moderately vigorous moderately open tree. Moderate scab resistance. Blooms midseason. Z3-4. **ME Grown.**

0330 Honeygold, $16.50

Isaac Newton's Tree Fall. Grantham, Lincolnshire, England, 17th c.

"You seek the orb that ought be on his tomb
It speaks of Rosy flesh and seeded womb"

In 1665 Sir Isaac became the world's most famous victim of a falling apple when a pale silvery-green dull-red-striped ugly lop-sided pear-shaped coarse-textured tart cooking apple fell and struck him on the head. Either the sight of the falling fruit or perhaps the whack itself prompted Newton to describe the law of universal gravitation and change the world forever. When Roger W. Babson founded Babson College in Wellesley, MA, he arranged to have a grafted tree planted at the college in April of 1954. Not only that, but now the famous apple is the crowning clue in Dan Brown's insanely popular best seller. We obtained scionwood from the Babson tree through the generosity of the college, where the old naturally semi-dwarf specimen still stands surrounded by a green iron fence, labeled with a bronze plaque. Said to produce a "sweet, delicately flavoured puree." As Robert Langdon put it, "The orb that ought be on Newton's tomb could be none other than the Rosy apple that fell from heaven, struck Newton on the head, and inspired his life's work." Z5-8. **ME Grown.**

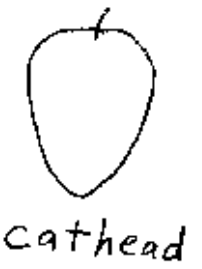


0360 Isaac Newton's Tree, $16.50

Judy Summer. Unknown parentage. Rome, ME. Russell Libby discovered what may well be the world's last Judy tree while poking around at a yard sale in Belgrade a few years ago. The variety originated a few miles away on the north side of Great Pond in Rome sometime before 1873. This particular specimen was likely set out by Carroll Sawyer whose grandson Terry is the current owner of the property. According to Terry, the tree was old when he was a kid and the soft red fruit is "earlier than any I know." Back in its prime it was annually bearing. We're hoping the old hollow broken tree will put out at least one more crop. Who was Judy? Z4-6. **ME Grown.**

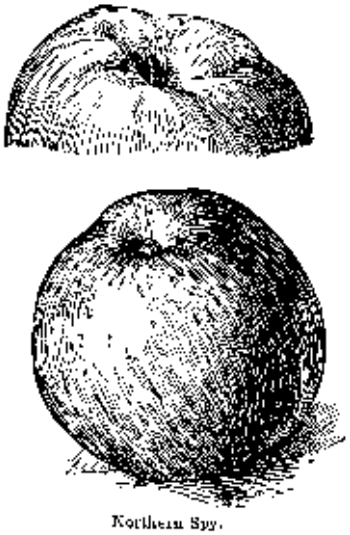
0392 Judy, $16.50

Kavanagh Fall. Unknown parentage. Damariscotta Mills, ME, 1790. The story goes that locally renowned shipbuilder James Kavanagh brought seed or scions or a small tree of this apple from Ireland when he moved to Maine. Once quite popular locally, but never known much beyond Damariscotta Mills. We first gathered our scionwood with historian and Kavanagh enthusiast George Dow from what we thought was the last living tree, although we've since discovered three more trees in the area. Extremely large yellow-green partially russeted fruit. Also called **Cathead** because of its distinctive shape with large stem end tapering to a small calyx end, typical of Irish apples. Not for fresh eating, but excellent for cooking and drying. A treat fried: core and slice thickly, with skin. Fry in pork fat. Add water as necessary till soft. Then add "a few dollops" of molasses. Serve with biscuits. Grows to be a huge long-lived tree. Blooms late. Z4-6. **ME Grown.**



0395 Kavanagh, $16.50

ME Grown = grown in Maine by a member of the Fedco growers coop



Liberty Late Summer-Fall. NY 55140-19 [Macoun x PRI 54-12 (PRI Coop complex cross includes Rome Beauty, Jersey Black, McIntosh, Wealthy and *M. floribunda*)]. NY Stn, 1978. Often cited as the best of the disease-resistant varieties, particularly in the Northeast. Somewhat similar to Macoun. A handsome medium-sized round-conic bluish-pinkish-red apple with crisp white flesh of very good dessert quality when dead ripe. Excellent cooking and cider too. Recommended for single-variety cider. Keeps till late fall. Begins fruit production at an early age, bearing consistent heavy annual crops. Naturally well-structured sturdy tree is easy to care for. Considered to be 100% scab immune, though not resistant to insects or other lesser apple diseases. Allowing Liberty to crop too heavily at a young age can stunt final tree size and reduce productivity. Even with mature trees, thinning fruit clusters is important to maintain fruit size. Blooms early to midseason. Z4-6.

0436 Liberty, $16.50

McIntosh Fall. Thought to be a seedling of Fameuse or perhaps St. Lawrence x Alexander. Dundela, Ontario, 1811. First discovered by John McIntosh on his farm near the St. Lawrence River in 1811. Originally called Granny's Apple, then McIntosh Red, sometimes Gem, and finally McIntosh. Certainly the most important apple in the Northeast. Although not planted in many other locations, it grows to perfection in our cool climate. There are many strains of McIntosh, some striped, some blushed, some solid red. Recent strains have been selected for traits other than flavor, and the variety has gotten a bad reputation. This strain has green ground color overlaid with red stripes and blush. It was planted in about 1910 in Mercer, ME. Many of these trees are still alive and bearing large crops. Of all the strains we have sampled, this one has the best "Mac" taste. This is a delicious aromatic apple. Annual cropper. Large beautifully rounded spreading strong easily managed tree. Susceptible to scab. Does not keep well in ordinary storage. Blooms midseason. Z4-5. **ME Grown.**

0478 McIntosh, $16.50

Milden Fall-Winter. Alton, NH, about 1865. Old time all-purpose variety grown widely with great success where Baldwin lacked hardiness. Once fairly common in northern New England and still found in old western Maine orchards. Large oblate-to-conic fruit with a thin skin mottled and splashed with bright red. The fine-textured whitish flesh, tinged with yellow, is coarse, juicy, both sparkly crisp and melting. Take a bite and first it says "tart," but then it says "sweet." Very pleasing. Good for eating and cooking. Famous for winter pies. Ripens late and keeps till late winter. Large vigorous tree. Z3-4. **ME Grown.**

0491 Milden, $16.50

Milo Gibson Fall. Unknown parentage. Possibly from Oregon. A mid to late fall dessert apple with a unique and wonderfully strong licorice flavor. I love it. As distinctive in its own way as Sweet Sixteen is. Not tart but very rich, full and sweet. Shaped like a Mac with the coloring of a Ben Davis. Roundish slightly flattened stem and stern, muted yellow, about two-thirds covered with a fairly solid blush of red, overlaid with some stripes of slightly darker red. Hermon, ME, grower Don Johnson brought fruit to me a couple of years ago. It was subsequently *the* hit at two taste tests that fall. One woman even tracked him down and begged for a tree. He later wrote to me that "The 'licorice' flavor seems to vary from apple to apple. In some I don't even notice it—even when I'm looking for it, and in others it is quite pronounced." The late Milo Gibson was one of the founders of the North American Fruit Explorers (NAFEX) many years ago. No one seems to know if he discovered or bred or even re-named this delightful apple, but noted apple collector Richard Fahey wrote, "I feel an affection for old Milo when I eat one of these apples." Regular bearer. Z4-7. **ME Grown.**

0492 Milo Gibson, $16.50

Newtown Spitzenburg Fall. Unknown parentage. Newtown, NY, 1817. Medium-sized roundish-conic angular fruit, patched with glowing orange-red, dark red and russet, sprinkled with russet dots. Eclipsed by two apples that each bear half its name—Newtown Pippin and Esopus Spitzenburg—it is quite the deserving apple in its own right. It has been one of my favorites at the Tower Hill Botanic Garden tastings for the past few years. A true dessert apple. Each bite releases a charge of flavor that percolates in the mouth and throat. In *Apples of New York*, 1905, Beech describes it as, "firm, fine-grained, crisp, juicy, mild subacid mingled with sweet, rich, aromatic, very good to best in flavor and quality." He suggests it fell out of favor due to its unreliable cropping, variable size and dull coloring. Not tested yet in central Maine, so hardiness could be a concern for anyone north of Portsmouth. In short supply. Please indicate a substitute. Z5-7. **ME Grown.**

0520 Newtown Spitzenburg, $16.50

Northern Spy Winter. Chance seedling. East Bloomfield, NY, about 1800. A bronze plaque marks the site of the original tree of this former commercial giant, which is still a renowned Maine favorite. Large delectable all-purpose fruit has yellow background covered all over with pink and light red stripes and wash. Very juicy and tender. Even when the tender skin bruises, it still keeps extremely well. Medium-to-large moderately vigorous slightly upcurving late-blooming long-lived tree. Its one drawback is being slow to come into bearing, although for us it has been worth the wait. Prefers fertile well-drained soil. There has been much speculation as to the origin of the odd name. Some maintain it was named after the legendary Northern Spy, a notorious hardcore abolitionist hero during the early 19th century who assisted slaves in escaping north, set up safe houses for them *en route*, and robbed and killed slave catchers. Z4-6. **ME Grown.**

0545 Northern Spy, $16.50

Opalescent Fall. Ohio, 1899. To my taste buds, most popular modern apples are sweet and crisp but lack any distinctive flavor. As I search for new varieties to offer I am always on the lookout for extremely flavorful dessert varieties. Opalescent fits that description. I can't believe I'd driven by the old tree a mile from home probably a thousand times before I finally stopped and tried it one day at the insistence of fellow local fruit explorer Brian Miller. This very large brilliant deep red dessert apple will shock your tongue with flavor. It's crisp, it's sweet, it's tart, it's juicy but most of all it's supremely flavorful. Every so often I meet someone who knows Opalescent and all agree. Wow! Excellent fresh eating. Said to cook up well too though I haven't tried them yet. Will keep til mid-late winter. Vigorous medium-sized annually producing tree. Z4-6.

0583 Opalescent, $16.50

Priscilla Fall-winter. Co-op 4. PRI 1659-1= (Starking Delicious x PRI 610-2) PRI Co-op, 1972. The second variety released in the PRI (Purdue-Rutgers-Illinois) disease-resistant breeding program and still one of their best. Rarely found in catalogs anymore, perhaps because the patent ran out. Dark red conical scab-immune fruit with a very good crisp sweet flavor. Resembles Empire, a more familiar excellent fall apple that is difficult to grow and very susceptible to scab. Richard Fahey, long time orchardist and tester of hundreds of apple varieties, wrote to me, "Priscilla is my top recommendation for a close-to-disease-free apple that bears *every* year. Priscilla should be on your list—great cider!" Will keep into mid-winter. In short supply. Please order early or specify a substitute. Z4-7. **ME Grown.**

0627 Priscilla, $18.50

Red Gravenstein Late Summer. Uncertain Italian or German origin, 17th century or earlier. The most famous of all pie apples. There are numerous strains of Gravenstein. This deep solid purply-red strain can be found in old orchards in southern Maine. Mary Jones used this Red Gravenstein from Sweetzer's Orchard in Cumberland to win the Maine State Pie Championship a couple of years ago. She told me it's "sweet but very hard to describe…real nice…full-bodied…wonderful flavor." Ripens earlier than most other cooking apples, over the course of several weeks so you don't have to deal with them all at once. But they don't keep well. It's a minor miracle that Mary "somehow saved them until January for the State Championship." Large vigorous perfectly shaped tree. Easy to prune. Thanks to India Broyles and Bob Shafto for providing the scionwood from their ancient trees in Falmouth just up the road from Sweetzers. Triploid, will not pollinate other varieties. Blooms early. Z4-8. **ME Grown.**

0672 Red Gravenstein, $16.50

Red St. Lawrence Early Fall. Branch sport of St. Lawrence. Newburgh, ME. 20th c. A superb early fall all-purpose variety with high dessert quality and excellent sauce. Not a storage apple. Originated as a spontaneous mutation (sport) on one branch of Roger Luce's old St. Lawrence tree in Newburgh. Although marked with St. Lawrence's typical striking dark red lines and thin bloom, the medium-large round-oblate apples also have a unique rich red ground color. The dark red stripes and the lighter red background is stunning. A real knock-out. No other apple looks like it. Once you see this apple you'll never forget it. Flavorful and colorful sauce. Tender sweet mildly sub-acid flesh, tinted with red. Moderately vigorous long-lived healthy medium-sized tree. Good to heavy annual crops, ripening unevenly over several weeks in early-mid fall. Blooms midseason. Z3-5. **ME Grown.**

0677 Red St. Lawrence, $16.50

Reinette Simirenko Winter. Ukraine, before 1895. May have originated on the farm of Platon Simirenko in the Ukraine although some say it's just a synonym for a fine old nineteenth century New Jersey apple called **Wood's Greening**. Became an instant favorite—in the all-time top five, according to one taster—the day we were introduced to Reinette at the Fedco Warehouse. Medium-sized round waxy dotted grass-green fruit, often with a brownish-orange or pink blush. Sort of a Granny Smith for the North. Greenish-yellow tender crisp fine-grained subacid flesh makes excellent eating. The *Classical Fruits* catalog calls it a "sweet, wine-like tangy flavor." Ripens where Grannys do not. Stores well. Blooms late. Z4-7. **ME Grown.**

0699 Reinette Simirenko, $16.50

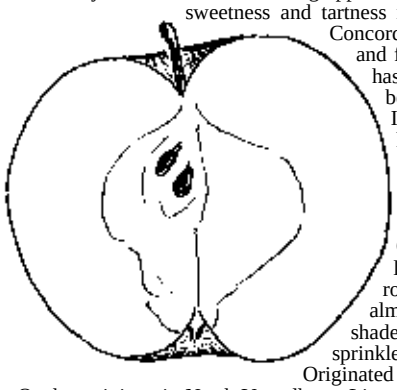
Roxbury Russet Winter. Roxbury, MA, early 1600s. One of best late winter dessert apples. Renowned for juice and cider. Together with Baldwin and Rhode Island Greening one of the big three commercial apples in New England for most of the nineteenth century. Not as sweet as Golden Russet. Rich, spicy and juicy. Hard medium-large oblate-conic-angular fruit covered with greenish to yellowish-brown russet. Not uniform in size, shape or color. Keeps all winter. Resistant to scab and mildew. In growing demand these days with the resurgence of interest in hard cider. The aromatic juice is recommended for both single-variety cider and blends. Medium-to-large vigorous spreading tree. Probably the first named American apple variety. Z4-6. **ME Grown.**

0720 Roxbury Russet, $18.50

Scott's Winter Winter. Unknown parentage. Newport, VT, 1864. A very tart dessert apple and a supremely wonderful mid-winter pie apple. Small-medium-sized roundish truncate fruit-completely and densely striped and dashed with red. Pick them in late October and store them at least a month before putting them to the knife. A pie in December will hold its shape and be still on the tart side. While nearly everyone will like these early pies, the real treat comes in February when the apples are still firm but a little spongy. Then the pies are at peak flavor. This past winter several friends told me it was the best pie they'd ever had. And I know it wasn't my crust. Later pies hold up well in the oven; although they might sink a bit, the taste is exquisite. Tart and flavorful. Will keep all winter in the root cellar. Z3-5. **ME Grown.**

0732 Scott's Winter, $16.50

Starkey Fall-Early Winter. Seedling of Ribston Pippin. Vassalboro, ME, 1820. My favorite fall fresh eating apple, its exquisite combination of crisp sweetness and tartness reminescent of a perfectly ripe Concord grape. Similar in appearance and flavor to Garden Royal. Starkey has more tartness. If I had to pick between the two of them (I don't; I have both) I would pick Starkey. It's a larger apple, bears more regularly and keeps well into winter. I get into them beginning in late September, with perfect eating being just about Christmas. Still quite decent in late winter. Medium-sized roundish fruit is rosy red, covered almost completely with fine lines, shades and stripes of darker reds and sprinkled with pronounced white dots. Originated on the farm of Moses Starkey, a Quaker minister in North Vassalboro. Listed in *The Apples of New York* but never got much notice outside central Maine where it was once quite popular. Annually bearing tough medium-large tree. A great apple. Z4-6. **ME Grown.**



0757 Starkey, $16.50

Stowe Fall-winter. Unknown parentage. Perham, ME, 1875. Originated on the Aroostook County farm of Francis Stowe from seed brought north from Massachusetts and planted in about 1862. The medium-sized slightly ribbed round-conic fruit is shiny yellow-green and lightly blushed with pinkish red. Many whitish dots lie barely visible just below the surface. The fine-grained yellowish flesh is tender, juicy, subacid and almost sweet. After reading about this apple in the 1907 *Maine Agricultural Report* I was determined to track it down. I came upon it on a beautiful October day a few years ago in a small abandoned farm orchard in Washburn, less than three miles from Perham. Recommended for Aroostook County and other northernmost growers. Will keep into late winter in the far north but will not keep farther south. Z3-4. **ME Grown.**

0763 Stowe, $16.50

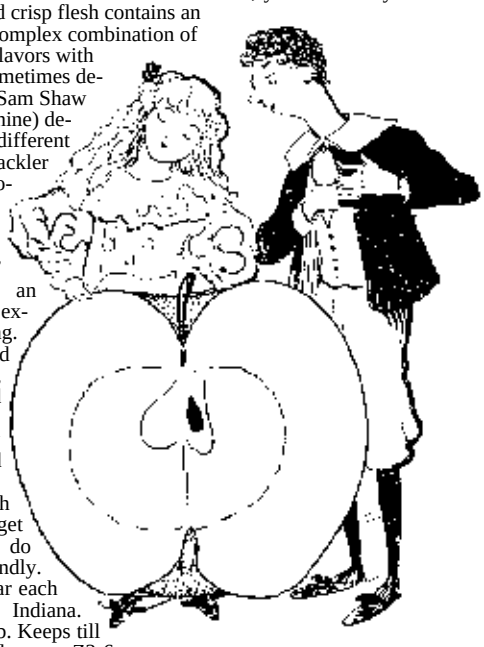
Summer Sweet Summer. Originated on the farm of Ichabod Thomas, Sidney, ME, about 1800. Also called **King of Sweetings**, **King Sweet**, **Sidney Sweet**, **Sidney Sweeting** or **Thomas Sweet**. Sometimes confused with Hightop Sweeting (also called Summer Sweeting), which originated in Plymouth, MA. One of several rare varieties introduced to me many years ago by long time collector and orchardist Earland Goodhue of Sidney. Small to medium-sized 2" roundish-conic-truncate yellow-green fruit with a beautiful golden apricot-orange blush. Firm somewhat juicy yellowish flesh with a mild sweet distinctly interesting and strange flavor, typical of the "sweet" apples of the past. Strange to us because these are not at all like the sugar-water super-sweet apples you find in supermarkets today. It's the first apple of the season for fresh eating. Also suitable for sauce and baked desserts. Healthy vigorous upright compact productive tree. Not a long season. If you go on vacation the wrong week you might come home to find them all on the ground. Rare. Z4-6. **ME Grown.**

0767 Summer Sweet, $16.50

Sutton Fall-winter. Thought to be a seedling of Hubbardston Nonesuch. Sutton, MA, 1848. A dessert apple with a mild yet spicy mango flavor. Even green, this is a very tasty apple. Another one of my favorite finds from the Tower Hill Botanic Garden collection in Boylston, MA. At its peak in early January. Not a cooking apple. Medium-large roundish-oblate green fruit largely covered with a solid rusty red blush, peppered with light gray dots, odd bits of russet and featuring an olive-green russet blotch around the stem. Visually reminiscent of Hubbardston Nonesuch. Quite juicy with a fine smooth buttery texture. Keeps nine months in the root cellar. Although currently on trial in central Maine, for now, it should be considered iffy north of the Portsmouth bridge. Z5-7.

0769 Sutton, $16.50

Sweet 16 Early Fall. MN 1630 (MN447 x Northern Spy). U Minn, 1979. Whenever anyone eats a Sweet 16 for the first time, you know they will be surprised. Fine-textured crisp flesh contains an astounding unusually complex combination of sweet nutty and spicy flavors with slight anise essence, sometimes described as cherry-like. Sam Shaw (my nephew, then age nine) declared, "It has a ton of different kinds of flavors." Ed Fackler (nationally esteemed pomologist, then about "our" age) described it as "expensive bourbon with a shot of vanilla." Either way, this is an amazing apple. Truly excellent fresh eating. Round-conic bronze-red medium-sized fruit, striped and washed with rose-red. Annual bearer if thinned. Very hardy moderate-sized vigorous vase-shaped tree grows upright with willowy branches that get loaded with fruit but do not break. Grower-friendly. Becoming more popular each year from Maine to Indiana. Some resistance to scab. Keeps till midwinter. Blooms midseason. Z3-6. **ME Grown.**



0777 Sweet 16, $16.50

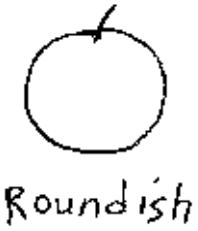
Tolman Sweet Fall-Early Winter. Unknown parentage. Sometimes called Talman Sweet and numerous variations thereof. Possibly from Dorchester, MA. Extremely old. One of the first American apples and one of the few to remain popular for centuries. Truly an all-purpose fruit, used for cooking, dessert and even animal fodder. Once popular for "pickling, boiling and baking." Likely *the* most recognizable flavor of any apple. Interesting peculiar sweet strange flavor you'll never forget after you've eaten it once. It's sort of a seventeenth century taste. Some like it and some don't. I do. Moderately juicy medium-sized greenish fruit, often marked by a suture line running from top to bottom and sometimes with a bit of a blush. Long-lived reliably bearing medium-sized vigorous tree bears moderately young. Dark green leaves with bluish cast. Still quite common in small old central Maine farm orchards. Z4-6. **ME Grown.**

0800 Tolman Sweet, $16.50

Tumanga Fall-Winter. Cox's Orange Pippin x Schoner von Nordhausen. Kaiser Wilhelm Institut, Muncheberg, Germany, 1930. Originally called **Auralia.** Intense aromatic rich dessert apple, resembling Cox's Orange Pippin. Grown in Germany primarily for its excellent juice. One of the fine apples that orchardist Mark Fulford has introduced to central Maine. Thank you Mark! Crisp juicy and sweet, medium-sized round-to-oblate yellow fruit, half covered with a dusty mauve-red overcoat and a large ring of russet radiating out from the stem. Semi-vigorous productive annual-bearing tree produces clean scab-free fruit that stores 3-4 months. Z4-6. **ME Grown.**

0820 Tumanga, $16.50

Vermont Gold Fall. (pp #7618) Rob #3 (Red Delicious x open pollinated) William Luginbuhl, MD, introduction, Pantan, VT. Tender sweet *extremely* juicy dessert variety with a long fall season beginning two weeks before McIntosh and extending for a month or more. Picked early they are slightly tart. Picked successive weeks, the character shifts as the roundish greenish-yellow pink-cheeked fruit sweetens up. The flesh is so juicy and the skin so tender that Vermont Gold does bruise with ease. Not an apple to shovel on a ship; handle with care. Luginbuhl's young son Rob grew eight seeds in a pot some thirty years ago. "All were reasonably good, but Rob #3 was outstanding." They named it Vermont Gold and it has become a local favorite. Ray Allen of Allenholm Farms about 25 miles away in South Hero has over 300 Vermont Gold trees in his commercial orchard. "They are a wonderful apple." Luginbuhl patented the apple because he was curious about the patenting process. He's never charged royalties, nor does he intend to do so. Keeps well for a fall apple but is definitely not a winter keeper. Blooms midseason. Z4-6. **ME Grown.**

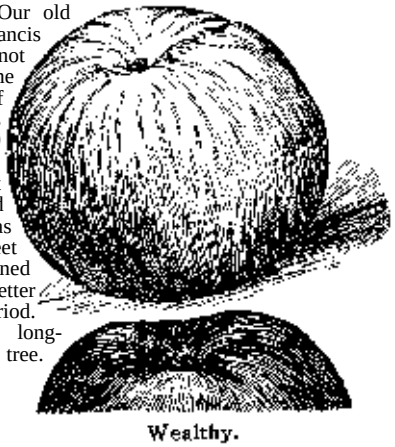


0837 Vermont Gold, $16.50

Wally Polley Late Summer-Early Fall. Possibly a Duchess seedling. Bridgewater, ME. Similar to Duchess but with greatly superior fresh eating qualities. In its prime at the end of September. Would probably have the same fine cooking qualities as Duchess. Wally and Kathy Polley first brought me the fruit several years ago at Common Ground Fair. I'd sampled so many apples I could hardly stand the thought of another. But they insisted and when I bit in, I was delightfully pleased, though not surprised. I had learned over the years that if Wally said it was good, it would be. Discovered on the hillside above their beautiful Bridgewater farm, the original tree stands not much taller than 12 feet. Wallace passed away suddenly last January at the age of sixty-nine. We offer the tree in this year's catalog as a tribute to this dedicated gardener and farmer. Recommended for the coldest districts. Extremely hardy. Z3-4. **ME Grown.**

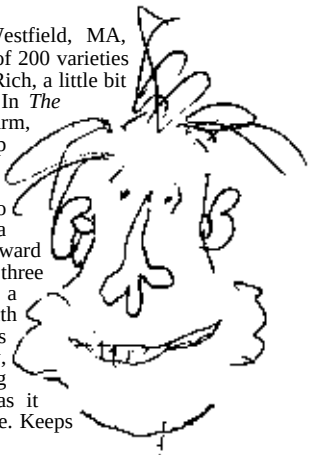
0846 Wally Polley, $16.50

Wealthy Fall. Cherry crab seedling. Excelsior, MN, 1860. A Maine native of sorts, the seed having come from Bangor. Superb all-purpose fall apple, one of the most famous of all hardy varieties. With its perfect texture and complex flavors, Wealthy once again proved itself to be the undisputed champion for fall apple pies in the 2003 Belgrade Lakes Pie Taste-Off. Our old friend, long-time orchardist Francis Fenton, believes Wealthy—not McIntosh—deserves to be the favorite commercial apple of northern New England. The trees his father planted in Mercer 99 years ago are still going strong. Round-oblate medium-sized fruit is pale greenish-yellow streaked with carmine. About as firm as McIntosh. Tender very juicy sweet sub-acid flesh is white, often stained red. Good eating and even better cooking! Ripens over a long period. Productive moderately vigorous long-lived small to medium-sized tree. Blooms early. Z3-4. **ME Grown.**


Wealthy.

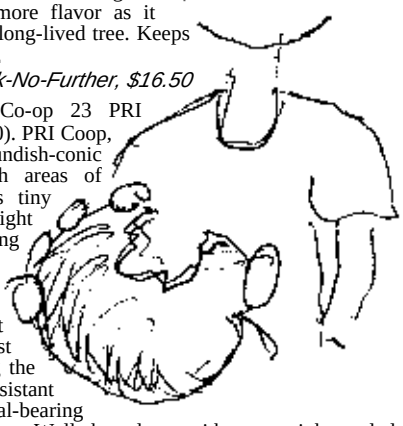
0865 Wealthy, $16.50

Westfield Seek-No-Further Winter. Westfield, MA, mid 18th century. A Hudson River grower of 200 varieties declared it's "the best apple in the world." Rich, a little bit sweet, a little bit sour: it has everything. In *The Apples of New York* Beech writes, "firm, medium in grain or a little coarse, crisp tender, breaking juicy, mild subacid, rich, sometimes astringent, peculiarly aromatic, sprightly, very good to best." After a drive to Pennsylvania with nothing to eat but a bushel of Seek-No-Furthers, grower Howard Wulf said, "If you can live on them for three days and not get sick of them, man, that is a great apple." Deep yellow skin covered with dull rusty red, bright red and russet patches and streaks, carmine stripes, and yellow, grey and russet dots. Also an outstanding drying apple that develops more flavor as it dries. Vigorous hardy rugged long-lived tree. Keeps till midwinter. Z4-6. **ME Grown.**



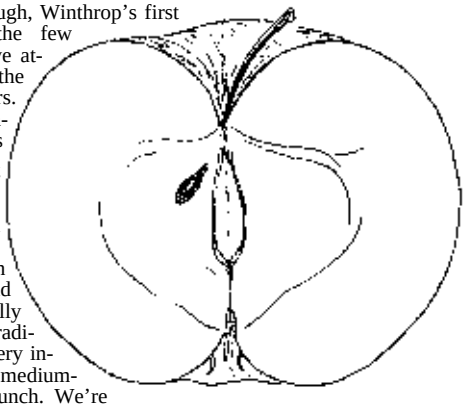
0875 Westfield Seek-No-Further, $16.50

Williams Pride Summer. Co-op 23 PRI 2845-1=(PRI 1018-101 x NJ50). PRI Coop, 1988. Dark maroon-purple roundish-conic irregularly shaped fruit with areas of glowing rosy red, numerous tiny white dots and a thin bloom. Light cream flesh with red staining just under the skin is firm, crisp and very juicy with a nice acidic blend of tart and sweet, full flavor reminiscent of Fameuse. Probably the most popular summer apple among the newly developed disease-resistant introductions. Vigorous annual-bearing tree with some biennial tendency. Well-shaped tree with strong right-angled branches that do not require careful training. Long ripening period means you don't have to eat them all at once. Stays crisp longer than other summer apples. Highly resistant to fireblight and cedar apple rust, resistant to powdery mildew. Scab immune. Blooms midseason. Z4-7. **ME Grown.**



0885 Williams Pride, $16.50

Winthrop Greening Late Summer-Fall. Ichabod Howe Farm, Winthrop, ME, before 1800. Ichabod Howe (1731-1810) laid out many of Winthrop's roads, organized construction of its first church, was an accomplished trapper and hunter, served seven terms as selectman and was, appropriately enough, Winthrop's first orchardist. One of the few Maine apples to receive attention from outside the state over the years. Quite popular throughout central Maine as late as 1920; now all but unknown. Large 3 1/4" flattish-oblate beautiful fruit, light green with a red-orange wash, small greenish dots, and splashes and ribs of russeting, usually with a patch of russet radiating from the stem. Very interesting sweet flavor, medium-low acidity, with a crunch. We're pleased that two years ago a Winthrop Greening and another Winthrop apple, Moses Wood, from Fedco were planted at the new high school in Winthrop. Blooms late. Z4-6. **ME Grown.**



0905 Winthrop Greening, $16.50

Wolf River Fall. Alexander seedling. Near Wolf River, WI, 1875. Perhaps the most famous old time apple in Maine, likely due to its catchy name and its extremely large—even huge—round-oblate fruit. Pale yellow-green skin mostly covered with pink, deep red and bright crimson. Almost always has a vivid yellowish-greenish russety splash around the stem. Creamy-white coarse firm-but-tender flesh. Aromatic subacid flavor is very good for cooking. Makes an excellent baked apple and a decent pie. Particularly tasty dried. Not much good for fresh eating, but good things happen to the flavor when it's dried. I cut them in full slices right across the core and place them on a screen above the wood stove. They dry in a couple of days. Keeps until late fall. Large moderately vigorous productive spreading tree. Scab resistant. Blooms midseason. Z3-5. **ME Grown.**

0915 Wolf River, $16.50

ME Grown = grown in Maine by a member of the Fedco growers coop

Cider Apples

Cider was for hundreds of years the most popular drink in Britain and other parts of northern Europe. It was also the most popular drink in the eastern U.S. until well into the 19th century. It was almost always fermented. Over here, most cider orchards were composed of nameless seedling apples, although a few varieties such as Golden Russet, Roxbury Russet and Hewe's Crab were recognized as premier cider apples. In England however, there is a long tradition of cider varieties. These are NOT for fresh eating. In fact, most taste terrible. Nor are they suitable for sweet (unfermented) cider, although some might add character to a sweet cider blend. However, they all possess qualities that make them very desirable for fermented cider production, and fermented cider is what we mean by 'cider'.

The National Fruit and Cider Institute in Long Ashton, England, was formed in the early 20th century and evaluated about 2000 cider varieties, classifying them into four categories: **sharp** (low in tannins, high in acid), **sweet** (little or no tannin, low acid), **bittersharp** (high in tannins and high acid), and **bittersweet** (high tannins and sugar, low acid, astringent, said to make the highest quality cider). **Tannin** denotes naturally occurring compounds whose bitter astringency gives cider rounded full flavor, body, and golden color. The Cider Institute also applied the term **vintage** to those varieties that possess the perfect qualities for cider.

Bittersweets should not be pressed alone. They don't contain enough acid to make quality single-variety ciders. Cider needs a sharp apple to provide some acid. Blend the bittersweets with Foxwhelp, Kingston Black, Stoke Red, or a tart apple such as Baldwin, Cox Orange Pippin, Duchess, Dudley, Esopus Spitzenburg, Fallawater, Golden Russet, Northern Spy, Roxbury Russet, Scott's Winter, Stark, Starkey or even Brandywine Crab.

A well-planned cider orchard includes several varieties of each season, ripening in a progression through the fall. (It does no good to have an early bittersweet if none of your other varieties will be ripe until late October.)

Many of these vintage apples have been imported to the U.S. in recent years and cider enthusiasts are growing them. In response to this renaissance, we are offering some of the best varieties again this year. We hope to offer these and other vintage cider apples in the future. Our thanks to Steve Wood of Poverty Lane Orchards and Farnham Hill Cider in Lebanon, NH, for his advice and for providing us with piles of scionwood for this project.

Some of the cider apples are in very short supply. Please indicate one or two alternatives. If you plan to order more than a few trees and would like to discuss availability, call or send us an email. If necessary we can custom graft larger quantities of any of these varieties.

All cider apples are on standard (Antanovka) hardy seedling rootstock. (3-6' trees)

Cider apple collection A package of seven trees to begin your cider orchard. We will choose two bittersharps and five bittersweets for each collection. The seven trees will include at least six different varieties. **ME Grown.**

0970 Cider Apple Collection, $100.00

Bramtot Fall. Bittersweet. Thought to be a seedling of the old variety Martin Fessar. France, mid 19th c. The Woolhope Naturalists Field Club brought it to England in 1884. Small ugly conic green partially russeted fruit with a dull orange blush. Firm cream-colored quite bitter very astringent flesh with a very high sugar content. Horrible fresh eating but an excellent bittersweet for blending in cider. Not very well known and rarely included in the literature. Steve Wood of Farnham Hill Ciders called it "a lovely little apple with nice juice, interesting, aggressively tannic." Strongly biennial. Z4-6. **ME Grown.**

0973 Bramtot, $16.50

Chisel Jersey Late Fall. Full bittersweet. Martock, Somerset, England, 19th c. Chisel Jersey is one of the most famous of the Somerset bittersweets. Round-conic red-striped fruit with a brownish-pink blush. Good sugar content and slow to medium fermentation. Medium acidity, very astringent, harsh and high in tannins. Strong rich full-bodied colorful cider. Best blended with other apples. In old English 'chesil' means pebble. Chisel Jersey is small, hard and bitter! Spreading tree may require encouragement to develop a strong central leader. Consistent cropper. Closely related to Dabinett; they should not be relied upon to pollinate one another. Late bloomer. *In short supply. Please indicate an alternative.* Z4-6. **ME Grown.**

0978 Chisel Jersey, $16.50

Dabinett Late Fall. Medium bittersweet. Probably a seedling of Chisel Jersey, Middle Lambrook, Somerset, England. Most popular cider variety in Somerset today and the mainstay of Poverty Lane's cider orchard. Medium-sized light yellow fruit with a medium-dark red blush and very dark red stripes. Sugar content fair and fermentation moderate. High quality and well-balanced low-acid cider with a soft-tasting tannin. Soft but full astringency. Louise Wood described the taste of biting into one as "like sucking on old pennies." Picked last week of October so it should be blended with other late varieties. Crops regularly. Grower-friendly tree with a spreading drooping habit, may require help in developing a strong central leader. Not pollen compatible with Chisel Jersey. Midseason bloomer. Z4-6. **ME Grown.**

0982 Dabinett, $16.50

Ellis Bitter Early Fall. Medium bittersweet. Newton St Cyres, Devon, Somerset, England. Useful particularly because of its early season ripening. Use it to get the cider press back into the swing of things. The large oddly conic—sometimes ribbed—yellowish-green largely red-blushed fruit is sweet, astringent, crisp and juicy. Fast-growing large spreading vigorous tree produces regularly. Midseason bloomer. Z4-6. **ME Grown.**

0984 Ellis Bitter, $16.50

Foxwhelp Fall. Bittersharp. According to Steve, the famous original 400-year-old Foxwhelp of yore has long disappeared. No one has it anymore on either side of the Atlantic. Not only that, but no one knows the origin of this "new" Foxwhelp. However it is an excellent bittersharp and an important apple for the cider orchard. Blend it with the fall bittersweets. Medium-large brilliant red fruit. Considered moderately vigorous and a good cropper. High specific gravity. Early-season bloomer. Z4-6. **ME Grown.**

0986 Foxwhelp, $16.50

Major Early Fall. Full bittersweet. Old variety probably originating in central Somerset County, England, before 1900. Smallish yellowy-green conical fruit, striped and blushed with pinkish red. Looks a bit like a red striped lemon. Fruity flavor, juicy with plenty of tannin. Combine with other early varieties. Vigorous tree with a good central leader and a spreading branching habit. Midseason bloomer. Z4-6. **ME Grown.**

0998 Major, $16.50

Medaille d'Or (Gold Medal) Late Fall. Full bittersweet. Developed by Mr. Goddard of Boisguillaume, Rouen, France. Introduced into England in 1884. Yellow and orange russeted fruit. In the 1993 British text, *The Book of Apples*, Joan Morgan and Alison Richards write that it "produces sweet, heavily astringent juice and full bittersweet cider 'often high in alcohol, fruity and good quality'." Combine with other late varieties. Z4-6. **ME Grown.**

1000 Medaille d'Or, $16.50

Michelin Midseason. Medium bittersweet. Developed by Mr. Legrand of Yvetot, Normandy, France. Introduced into England in 1884. Named after a famous cider researcher. Small-medium conical ribbed pale green fruit dotted with russet and sometimes slightly blushed. Along with Dabinett one of the most reliable croppers. Medium-sized tree with upright multi-leader habit. Sweet astringent flesh and soft tannin juice, best used for blending with other midseason varieties. Midseason bloomer. Z4-6. **ME Grown.**

1003 Michelin, $16.50

Somerset Redstreak Early Fall. Medium bittersweet. Old variety from the Sutton Montis area, Somerset, England. Frequently planted in newer British cider orchards. Medium-sized conic fruit, striped and blushed shiny red. Steve call this "a lovely apple." Considered a heavy cropper. Picked mid-late September in central New Hampshire. Tree has an upright growth habit, may require heading back the central leader in early years to develop strong lateral branches. Strongly biennial. Not precocious. Midseason bloomer. Z4-6. **ME Grown.**

1020 Somerset Red Streak, $16.50

Stoke Red Late Fall. Bittersharp. Also called Neverblight. May have orginated in Rodney Stoke or near Wedmore, Somerset, England. Small roundish-oblate dark red-striped fruit. Sharp juice with some astringency. Very sharp cider. Consistent heavy cropper and a reputation in the U.K. for resistance to pests and disease. (That's over there, mind you.) Good cropper but may be biennial. Late bloomer. Pick late in the fall and combine with other late varieties. Z4-6. **ME Grown.**

1023 Stoke Red, $16.50

Yarlington Mill Fall. Medium bittersweet. Yarlington, near North Cadbury, Somerset, England, 1898. Once common in farm orchards of central Somerset. Large yellow conical fruit with a pinkish blush and distinct lobes at the blossom end. Considered an all-round excellent variety, reliable, productive and adaptable to varying conditions. Rich brown low-acid mild lovely aromatic fruity cider, not aggressively tannic. Above average sugar content. Slow to medium fermentation. Somewhat gangly tree with a lot of blind (non-productive) wood. You may need to head back the leader in early years to encourage strong laterals. Midseason bloomer. Z4-6. **ME Grown.**

1029 Yarlington Mill, $16.50

Scionwood

Again we offer scionwood from a wide selection of fruit trees including many listed in this catalog. Price is $3.00 per stick (about 8") plus shipping. To order scionwood or rootstock for early shipment, send us a SASE requesting a scionwood order form or download it from the Fedco Trees website. Deadline for ordering scionwood and rootstock for early shipment is February 25, 2005. We will ship around March 30.

Hardy Rootstocks

We consider these to be some of the best rootstocks for home or commercial use. Any of these produces fruit suitable for wildlife without grafting. For rootstocks not listed, or for larger calipers or larger quantities, please write for information. We also offer grafting supplies in the Organic Growers Supply section of the seed catalog.

You may order rootstock to be shipped around March 30. To do so, use the scionwood order form obtained by requesting it with a SASE or downloading it from our website. Rootstock ordered on the regular order form in this catalog will be shipped with the rest of the Tree order in April.

Please join us Sunday, March 27, 2005, at the Maine Tree Crop Alliance annual scionwood exchange and grafting workshop in the exhibition hall of the MOFGA's Common Ground in Unity.

Malus **'Antanovka'** (Apple) Hardy Russian seedling rootstock for standard-sized apple trees. Z3. (1/4" caliper)

1040 Malus antanovka, bundle of 10, $16.50

EMLA 26 (Apple) Produces a tree about half the size of a standard tree, in between the size of M9 and M7. Appears to be hardier than M7, producing better quality fruit. Adaptable to all but badly drained soils, not as sensitive to mineral deficiencies as some rootstocks. Staking recommended in exposed locations. Z5, maybe 4. (1/4" caliper)

1042 EMLA 26, bundle of 10, $16.50

Prunus americana (Plum) Seedling rootstock for American, Japanese or hybrid plums. Seedling plum produces very decent 1" fruit without grafting. The best pollinator for hybrid plums. See explanation in plum section on page 19. Z3. (1/4" caliper)

1049 Prunus americana, bundle of 10, $16.50

Prunus cerasifera **'Myrobalan'** (Plum) Seedling rootstock for European type plums. Not recommended for American or hybrid plums. Z4. (1/4" caliper)

1052 Prunus cerasifera, Myrobalan, bundle of 10, $16.50

Pyrus communis (Pear) Seedling rootstock for pears. Exceptional resistance to pear decline. Good uniformity. Z4. (1/4" caliper)

1056 Pyrus communis, bundle of 10, $16.50

ME Grown = grown in Maine by a member of the Fedco growers coop

Pears

Pyrus communis are native to temperate Europe and Asia and can grow up to 100' tall in the wild. Many pear varieties are hardy in New England, but tend to take longer to come into bearing than apples. Further south, pears tend to bear annually. However in Maine, where they are approaching their northern limit and due perhaps to our harsher climate, pears tend to bear biennially. Pick fruit when green and ripen it on the shelf. Or, for optimal eating, try Ed Fackler's method: "...when fruits exhibit slight color changes, begin to test pressure (using your thumb) near the stem. When there is a slight "give," pick all the fruit, store at or near 35˚ for 7 or more days. Then remove them as needed, allow them to sit at room temps for 2-4 days which allows them to ripen to peak flavor."

Many thanks to Earland Goodhue for his ongoing support. Once again this year Earland generously provided us with much scionwood from his amazing pear and apple orchard in Sidney, ME.

Pear blossoms are less attractive to bees than apple blossoms, so pears should be planted closer together to ensure pollination. Although some pears appear to be self-pollinating, **we recommend a second variety for pollination**. Bloom dates for all varieties are similar. Plant pear trees 15-20' apart. (3 1/2-6' trees)

Beurre Hardy Early Fall. Raised by M. Bonnet, Boulogne-sur-Mer, France, about 1820. Named in honor of the Director and Professor of Arborculture at the Garden of the Luxembourg in 1830. Brought to the U.S. about mid-century. Introduced to me by Mark Fulford. Large obovate obtuse pyriform light yellow fruit veiled and dotted with russet. When perfectly ripe, the fruit is very soft, melting, dissolving, practically all juice. You can take a bite and droplets of juice appear on the fruit where you bit. Perfumy and not overpoweringly sweet. No grit at all. Trees are vigorous, hardy, healthy and productive. Does not keep. Z4. **ME Grown.**

1115 Beurre Hardy, $16.50

Bosc Fall. Seedling in Lourain, Belgium, 1807. Also called **Beurre Bosc**. Oblong acute pyriform, or large and long-necked; dark rich yellow covered with cinnamon-brown russet. Distinctive sweet rich spicy buttery flavor. Melting juicy tender white flesh has smooth texture and a pleasing aroma. Somewhat gritty around the core. Good pollinator. Large vigorous upright spreading tree bears huge crops annually. A longtime favorite throughout central Maine. Z4. **ME Grown.**

1120 Bosc, $16.50

Clapp Favorite Mid-Late Summer. Said to be Bartlett x Flemish Beauty. Dorchester, MA, before 1860. Very hardy pear common in Maine for over 100 years. Medium-large fruit is pale lemon yellow, mottled bright red. Round-bodied with a short neck. Obovate ovate lightly obtuse pyriform! Medium-firm fine-textured with granular center, very juicy melting sweet fruit with that absolutely perfect "pear flavor" for fresh eating. Pick before completely ripe and finish indoors (tendency to soften at the center after ripening). Our scionwood comes from an ancient tree on Earland and Helen Goodhue's farm in Sidney. Z4. **ME Grown.**

1130 Clapp Favorite, $16.50

Comptesse Clara Frijs Summer. Germany, 19th c. High-quality dessert pear, fairly common in the Canadian Maritimes but quite rare in the States. As with apples, many of the best pears are virtually unknown; this is one of them. Grower Mark Fulford says, "The flavor is what gets me." It's the "most like nectar" of any of the 40 varieties he's grown. Buttery perfumy medium-sized smooth-skinned yellow to slightly green acute pyriform fruit sometimes has a sunnyside blush. Keeps for a month. Solid rugged hardy tree. Z4. **ME Grown.**

1135 Comptesse Clara Frijs, $16.50

Dana Hovey Winter. Thought to be a seedling of Seckel. Roxbury, MA, about 1854. Introduced by nineteenth-century fruit enthusiast Francis Dana who dubbed it *Dana's Hovey* in honor of CM Hovey, Boston nurseryman and author of *The Fruits of America*. Sometimes called **Winter Seckel** because of its similarity to Seckel. Small obovate obtuse pyriform intensely sweet highly aromatic tender storage pear. Excellent flavor; possibly the best eating of all winter pears. Keeps extremely well. Harvest in October and store in a cool dry spot. Still great eating in December—sometimes even as late as February. Rich golden-yellow russeted fruit. Hardy vigorous moderately productive spreading tree adapts to a variety of soils. No scab and relatively few bugs. Z4. **ME Grown.**

1140 Dana Hovey, $16.50

Giffard Summer. Chance seedling discovered by Nicolas Giffard, Foussieres, France, 1825. Also called **Beurre Giffard**. Introduced to the U.S. about 1850. Brought to my attention by the North American Fruit Explorers' former president, Bob Purvis, who touted Giffard as a pear with hardiness suitable for culture in Alaska. High-quality dessert pear ripens just before Clapp Favorite. Large acute pyriform fruit with a small core has tender greenish-yellow skin with a dotted red blush and conspicuous greenish or russet dots. Crisp tender yellowish flesh is melting, very juicy, highly aromatic and has very good flavor. Keeps well for a summer pear. Tree is medium-sized, vigorous, spreading and productive. Z3. **ME Grown.**

1144 Giffard, $16.50

Gourmet Late Summer. SD F15 x Ewart. SD State U, 1988. Although I do relish soft melting buttery pears, I also look forward to the Gourmet crop every summer. It's a decidedly crisp pear that still melts in your mouth. Although similar in texture to an Asian Pear, I find Gourmet has more flavor and less wateriness to it. It's a very nice addition to the mix of summer fruits. Produces a good crop in my orchard where it is pollinated by Seckel every year. Greenish-yellow thick tender skin with russet dots on 2" obovate obtuse pyriform fruit. Sweet yellow flesh. Medium-sized upright tree. Sterile pollen will not pollinate other trees. Z3. **ME Grown.**

1155 Gourmet, $16.50

Newhouse Late Summer. Unknown origin. Large—shaped like a softball—eating and cooking pear. Greenish skin webbed with russet. Coarse very *very* juicy sweet flesh, with a tinge of tanginess and occasional large pea-sized grit cells. Not buttery in texture. Very good fresh eating and an exceptional cooker. Fruit explorer Tom Vigue discovered it many years ago in a small pear orchard in Sidney, ME, and has been caring for the tree ever since. Tom is a huge fan of the pear and encouraged me to offer it. He calls it Newhouse after the current owners of the property. We have yet to track down its true identity. Tom makes delicious pear butter using Newhouse. He bakes them for a couple hours, runs them through a food mill after they're soft and bakes them some more. Wow. See sidebar for details. The tree has an upright form, similar to Bosc. Z4. **ME Grown.**

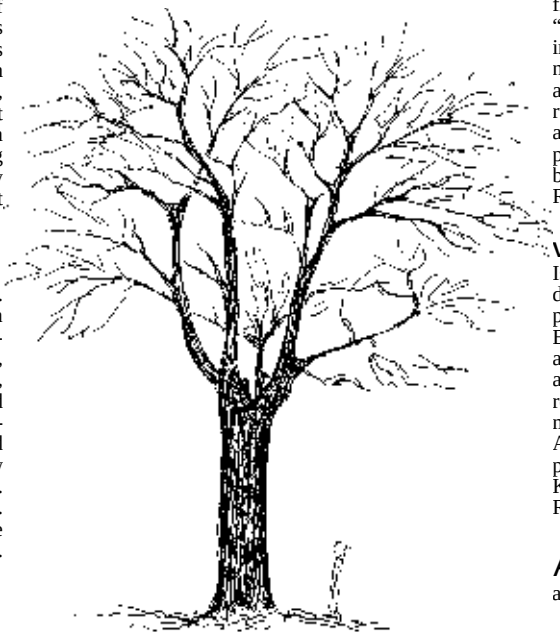
1183 Newhouse, $16.50

Seckel Late Summer. Seedling near Philadelphia, PA, early 1800s. Sometimes called **Sugar Pear**. Usually considered the best-flavored of all pears; even the skin is delicious. Small obovate fruit is yellowish-brown russeted with slight red blush. Juicy, spicy, distinctive and aromatic. Eat ripe off the tree or pick firm and ripen later. Very productive annual-bearing large tree, easy to grow. *The* most reliably bearing fruit tree I have. Scab and fireblight resistant. Will not pollinate Bartlett. Z4. **ME Grown.**

1230 Seckel , $16.50

Stacyville Late Summer. Unknown origin. When I first saw this pear in an old orchard in Stacyville, ME, I thought that the 50' tall vase-shaped tree was an elm. It was spectacular, dwarfing the surrounding apple trees. That tree, now held together with cables, is extremely old but still bears huge crops. My 13-year-old Stacyville is also loaded with fruit. Medium-sized obovate obtuse pyriform pears are light yellow with a beautiful orange to greyish-red blush. Sweet fruit has a delicious citrusy aftertaste. Self-pollinating, annual bearing, disease resistant, extremely hardy and very vigorous. Rare. Z3. **ME Grown.**

1240 Stacyville, $16.50



Making pear sauce and applesauce in the oven
Tom Vigue learned from an old-timer how to make syrupy fruit sauces and butters by roasting the fruit.

Fill a large (or huge) roasting pan with whole apples or pears with only the stems removed, as long as the fruit is nice quality and doesn't need more trimming. Roast at approximately 350˚ for a couple of hours, checking occasionally to mash down any fruit before it scorches. After two hours or more, when fruit is soft, process through a food mill to remove skins and cores. At that point you will have a sauce. Return sauce to the oven and roast for a few more hours, depending on how concentrated you want it. A very concentrated sweet fruit butter eventually results without ever burning the bottom of the pan.

Summercrisp Mid-summer. MN N33201 (Gaspard No. 5) Unknown parentage. U Minn, 1986. Brought to the Minnesota Horticultural Research Station by John Gaspard in 1933. Large obovate acute pyriform very sweet dessert and canning pear with green skin and a red blush ripens in August in Maine. A favorite of Donna and Chyp of Loon Song Farm in Hartland who bought one from us nearly 20 years ago and have been Summercrisp fans ever since. One reason Donna likes it is it comes on when you're looking for fruit, early in the season. "They're best crisp before they get supermarket soft." In fact, once they do soften, they go by fast. They eat them fresh, can them in quarters and juice the rest. The juice is so sweet, Donna told me she has to cut it with apple juice when she's canning it or it will get fizzy and explode. Precocious, annually bearing tree, medium-sized with typically conic habit. Long considered the hardiest variety in the Minnesota collection. Free from fireblight. Z3. **ME Grown.**

1250 Summercrisp, $16.50

Tate Late summer. Unknown parentage and unknown origin. Years ago the late Charles Berry of Unity introduced this large smooth sweet pear to local orchardist and fellow fruit explorer Mark Fulford. Mark has no idea where the pear originated or even if Tate is the correct name. Neither of us have been able to find a reference to it in any book. But the smooth sweet pear long ago commanded a spot in Mark's orchard and this year we've produced enough trees to offer it for sale. Large obovate obtuse pyriform fruit (like a squat Bartlett). Tender yellow skin tarnished with a bronze cheek but no russet. See one drop and it's time to pick the crop, then ripen it inside. The fruit will store 3 or 4 weeks. It's an unbelievable canning pear. One fruit fills the jar. Small well-structured tree bears a lot of fruit young and continues annually thereafter. Shows remarkable resistance to insects and disease. Z4. **ME Grown.**

1263 Tate, $16.50

Tyson Summer. Jenkintown, PA, about 1794. Widely planted in Maine for generations. After years of looking for a good source of grafting wood for this pear, we finally located a huge ancient tree in nearby Freedom. Well over 100 years old, the tree has lived through all the great winters of the 20th century. The definitive 1921 text, *The Pears of New York*, calls Tyson's flavor "second only to Seckel," and says that the "tree is the most nearly perfect of any pear grown in America." Went out of favor because it was not as large or pretty as Bartlett. Medium-sized acute pyriform deep dull-yellow fruit with some russeting and no blush is very juicy, sweet and aromatic. Very large vigorous annually productive upright spreading tree. Tolerant of bugs, disease and weather. Fire-blight resistant. Rare. Z4. **ME Grown.**

1270 Tyson, $16.50

Vermont Beauty Fall. Chance seedling. Grand Isle, VT, about 1860. How surprised I was to discover, amidst the slime in a crate of rotting pears I'd neglected for weeks, the Vermont Beauties just as perfect as the day I picked them and still absolutely delicious. Medium-sized acute pyriform fruit, lemon yellow with a bright red blush that fades into pinkish-red dots. Tender melting fine-grained juicy yellow-tinged flesh. An excellent dessert pear. Medium-sized healthy productive vigorous upright spreading tree. Keeps for several weeks! Susceptible to scab. Rare. Z4. **ME Grown.**

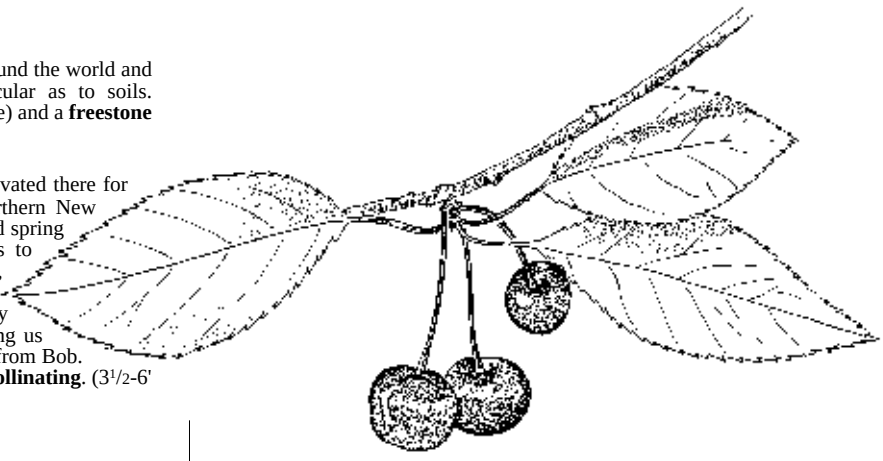
1287 Vermont Beauty, $16.50

Asian Pears *Pyrus pyrifolia*

Not available in 2005; plan to have back in 2006.

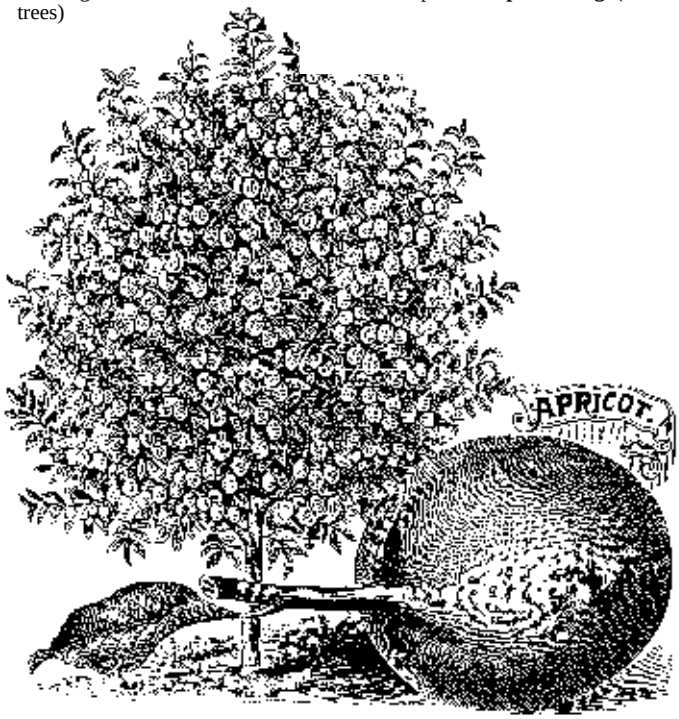
Stone Fruits

Prunus spp. are widely cultivated around the world and adaptable to most of New England. Not highly particular as to soils. **Clingstone** means the fruit's flesh clings to the pit (or stone) and a **freestone** pit drops away from the flesh.



Apricots

P. armeniaca are native to central Asia, cultivated there for about 4000 years, and only marginally adaptable to northern New England. Because their early blossoms are sensitive to cold spring weather, they are often planted with northern exposures to delay blooming. Large crops are possible, but uncommon, in Maine. The zone rating should be viewed as an approximation because much depends on your site. Many thanks to Bob Purvis of Minnesota who has been coaching us on apricot selection. The scionwood from these two came from Bob. We've got several more on trial! Plant 15-20' apart. **Self-pollinating**. (3½-6' trees)



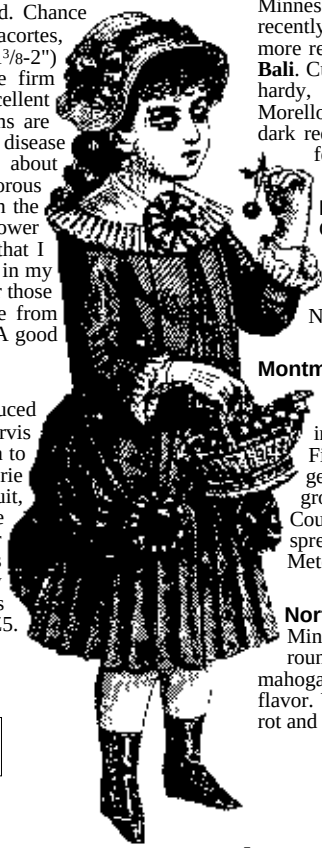
Puget Gold Summer. Originally called Cougar Gold. Chance seedling, possibly of 'Perfection'. Discovered in Anacortes, WA, by Jean Copeland. U of WA intro, 1987. Large (1⅜-2") roundish-ovate clear yellow red-blushed fruit. Dense firm sweet deep orange-yellow freestone flesh is good to excellent fresh eating, drying or canning. Prolific. The blossoms are more frost-tolerant than those of many apricots; disease resistance is above average. Ripens relatively late, about September 1st in central Maine. Moderately vigorous spreading tree will grow to about 15x15'. Offered with the encouragement of Downeast (coastal) Maine grower Richard 'Ozzie' Ossolinski: "Whereas not every PG that I have planted for clients has performed as well as those in my own orchard, I continue to recommend (and plant) it for those who are looking for a low (i.e. no) maintenance tree from which they might actually harvest some decent fruit." A good pollinator for other apricots. Warmer Z5/6. **ME Grown.**

1450 Puget Gold, $18.50

Westcot Mid-Late Summer. Scout x McClure. Introduced by Les Kerr, Morden, Manitoba, Canada, 1982. Bob Purvis wrote to me that "Westcot was said by some in Canada to represent a breakthrough for growers in the Prairie Provinces." Medium-large 1¼-1¾" roundish fruit, yellow-orange with a red blush. Smooth juicy freestone flesh with a mild sweet flavor. Fresh eating or processing. Retains its shape when cooked. Vigorous productive tree is upright to spreading, irregularly shaped, about 15' wide and 20' tall. Self-fertile. Ripens earlier than Puget Gold. Should be hardy in Zone 4. Z5. **ME Grown.**

1480 Westcot, $18.50

ME Grown = grown in Maine by a member of the Fedco growers coop



Sweet Cherries

P. avium are generally not hardy in Maine. Most grow into very large trees. We are currently testing some of the hardiest varieties and hope to have more of them available in upcoming years.

Stella Mid-summer. 2C-27-19 (Lambert x John Innes Sdlg. 2420.) Canadian Dept of Ag Research Stn, Summerland, British Columbia, 1968. The first hardy good-quality self-fertile sweet cherry. Large heart-shaped black-skinned fruit has juicy medium-firm black flesh. May be a disappointment to sweet cherry aficionados from the Northwest but could be like a dream come true for orchardists living in more tropical locales of Maine. Fruit buds are relatively tender. Upright spreading vigorous productive tree will grow to 25-30'. Self-pollinating. Z4. (3½-6' trees).

1550 Stella, $16.50

Pie Cherries

P. cerasus are called "sour," but they're delicious enough to eat right off the tree. Often producing crops in 3rd or 4th year, they're easier to grow than sweet cherries, and significantly hardier. They fruit in early to midsummer and don't mind heavy soil. They are generally divided into two groups: Morello types have dark red spherical fruit, dark juice and relatively small compact trees. Montmorency (or Amarelle) types have light red slightly flattened fruit, clear juice and medium-sized somewhat open trees. Although the trees are fully hardy in Zone 3, flower buds may be damaged in colder winters. **Pie cherries do not require another variety for pollination**. Plant 15-20' apart. (3½-6' trees)

Evans Mid-Late Summer. Unknown parentage. Edmonton, Alberta, Canada. Rescued from obscurity in 1976 by Dr. Ieuan Evans for whom it was named. Thought to have been brought to Alberta by early settlers from Minnesota. Known in the Edmonton area at least back to 1923 but only recently gaining widespread attention through the efforts of Dr. Evans and, more recently, Bill MacKentley of St. Lawrence Nurseries who renamed it **Bali**. Currently the best-selling fruit tree on the Canadian prairie. Incredibly hardy, possibly even to Zone 2. Large—even huge—crops of English Morello-type fruit virtually every year. Excellent eating, jams, jellies, pies, dark red juice and wine. Tolerant of a wide range of soils, although light fertile soils are preferred. Naturally dwarf tree. Z3. **ME Grown.**

1567 Evans, $18.00

Meteor Summer. MN 66 (Montmorency x Vladimir). U Minn, 1952. Considered superior to Montmorency. Very good eating right off the tree. Also excellent for pies, canning and freezing. Easy to pit. Excellent dried. Bright scarlet-red roundish-oval fruit. Clear bright yellow flesh and clear juice. Mildly acid flavor. Ripens after Northstar: mid-July in Central Maine. Reaches 12-16'. Z3. **ME Grown.**

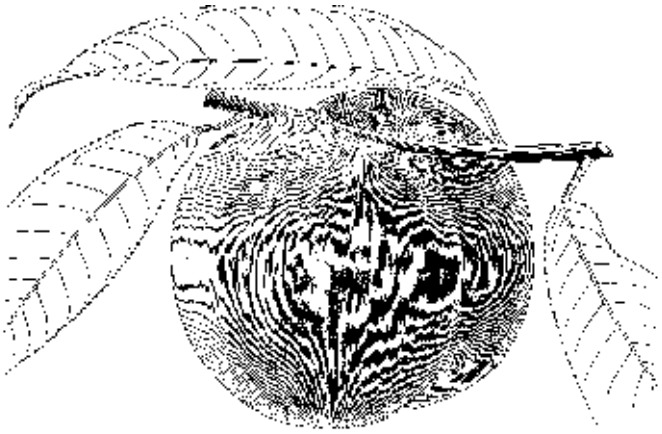
1575 Meteor, $18.00

Montmorency Summer. Seedling of Cerise Hative or Cerise Commune. Montmorency Valley, France, before 1600. Introduced to the U.S. about 1830. The most famous of all pie cherries. Not widely grown in Europe or Russia but long the standard of excellence in the U.S. Firm-fleshed bright red fruit makes a clear light pink juice. Although generally considered not as hardy as our other offerings, friends are growing and fruiting it quite successfully in northern Aroostook County, so it is hardy. Vigorous productive medium-sized upright-spreading tree tolerates a variety of soils. Parent of the fine variety Meteor. Z3. **ME Grown.**

1580 Montmorency, $18.00

Northstar Summer. MN 58 (English Morello x Serbian Pie #1). U Minn, 1950. Morello-type cherry can be eaten fresh when ripe. Large roundish heart-shaped fruit with a small stone. Dark glistening mahogany-red skin. Dark red meaty tender juicy flesh has pleasantly acid flavor. Very productive. A natural dwarf reaching 9-10'. Resistant to brown rot and cracking. Z3. **ME Grown.**

1590 Northstar, $18.00



Peaches *P. persica* Although many people will tell you not to bother growing peaches in Maine, if you've been repeatedly saddened by the poor quality available in the supermarket, what's there to lose? Jamie Greager, our lilac grower, has been growing excellent Red Havens a few miles from my farm for years—in Zone 4. Many other trees in northern New England are also producing large crops. While these are certainly not like what you'd get if you went to Georgia, they still taste awfully good. They bear young and so heavily that they may break branches if unthinned or unsupported. Peaches are usually unaffected by pests or diseases in northern areas. The trees may also die unexpectedly at any age as many did last winter. There are no truly hardy peach cultivars, although Reliance is considered the hardiest. **Peach trees do not need a second variety for pollination**. Plant 15-20' apart. (3½-6' trees)

Garnet Beauty Summer. Sport of Red Haven. Ruthven, Ontario, 1958. A mutation (sport) of Red Haven discovered by Garnet Bruner in 1951 and introduced seven years later. Medium to large yellow-fleshed semi-clingstone fruit with excellent flavor. Ripens 12 days earlier than Red Haven with similar hardiness. Vigorous and productive tree. Good bud hardiness. Recommended for colder disticts. Z4/5.

1618 Garnet Beauty, $16.50

Madison Summer. Ideal x Red Haven. VA Station, 1963. A fine peach for the North, with hardiness similar to Red Haven. Medium-large fruit with bright orange skin and bright red blush. Orange-yellow firm fine-textured juicy flesh with excellent very sweet rich peach flavor. Very good quality. Skin peels easily. Freestone, excellent canner. Very productive tree. Exceptional tolerance to blossom season frost. Z4/5.

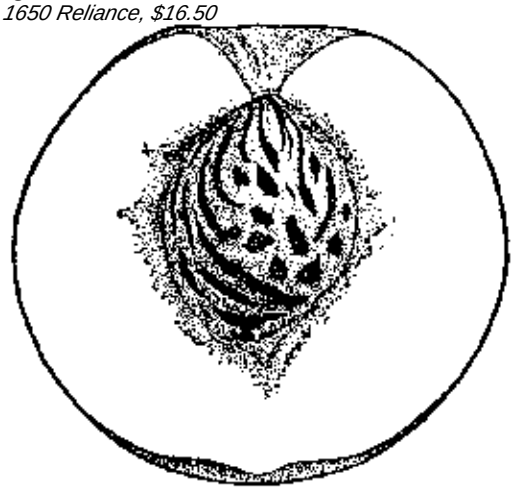
1630 Madison, $16.50

Red Haven Summer. Halehaven x Kalhaven. MI Ag Exp Station, 1940. Considered hardy, but not as hardy as Reliance. Medium-sized round fruit with beautiful red and golden-yellow skin and sweet firm fine-textured yellow flesh. Non-browning. Excellent for eating, freezing, canning, shipping. Probably the best-flavored peach we offer; also the world's most widely planted freestone peach. Hardy buds; vigorous highly productive disease-resistant spreading trees are tolerant to bacterial spot. Z4/5.

1645 Red Haven, $16.50

Reliance Summer. Open-pollinated seedling of Minn PHO 4559 x Meredith. NH Ag Exp Station, 1964. Considered the hardiest peach. Medium-sized, roundish, freestone. Rather dull red blush over greenish yellow. Bright yellow flesh, soft and juicy. Flavor usually considered fair, but those who grow it in Maine love it. Often produces large crops. Bears at an early age. Z4/5.

1650 Reliance, $16.50



Hybrid Plums *Prunus* spp., are extremely hardy crosses between various Asian plums and American species for hardiness.

Hybrid plum pollination has been glossed over—or avoided—in virtually all catalogs and fruit-growing literature for generations. Some years on our farm we get decent crops, but most years we don't get nearly enough. We have tried a number of different strategies as Fedco catalog readers will know. We still recommend planting the trees close enough together for the branches to "co-mingle." However a recent article by Rick Sawazky of the Department of Plant Sciences, University of Saskatchewan, may provide the breakthrough we've all been searching for:

"Most writers have overlooked or significantly understated the pollination requirements for growing good plum crops. The exception is George F. Chipman who edited the *Prairie Gardener* for many years and who wrote about plum pollination in 1934. He summarized a study done by Prof. W.H. Alderman at the University of Minnesota by saying, '...very few hybrid plums would accept pollen freely from other hybrids, but they all accept pollen from native plums.'"

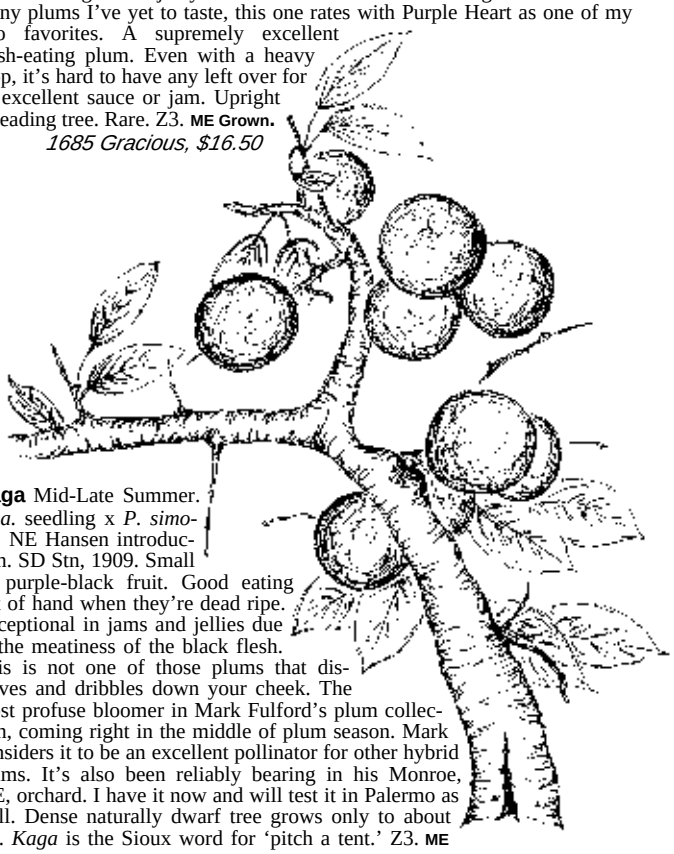
Our own suspicions, as well as our experiments this spring, appear to corroborate this view. Simply by planting native plum pollinators among the hybrids, it may prove possible to produce large regular crops with very little effort. Hooray! Of course, plums are still susceptible to the small pesky insect, plum curculio. But PC is not difficult to control organically with Surround (see the Organic Growers section of the Seed catalog). And, with decent pollination, Surround may not even be necessary. While Toka, South Dakota and Kaga are often recommended as the best pollinators, we also recommend planting *Prunus americana* or *P. nigra* seedlings in the orchard as pollinators. Stay tuned for more developments. Bloom times similar for all varieties. Not susceptible to black knot. (3½-6' trees)

American Plum Seedling *P. americana* 15-20' Seedling plum that grows in thickets and produces very decent red, yellow and orange 1" fruit, suitable for fresh eating, canning and freezing. Spectacular white bloom in spring. Plant singly as a graceful specimen or plant 2-3' apart and let the branches intertwine for maximum pollination. Red fall color. The best pollinator for hybrid plums. See above. Plant one of these for every 3 or 4 plum trees, within 10' of each of them. Use as rootstock for hybrid and Japanese plums. Extremely hardy. These are single 3½-6' trees; for bundles of 10, ¼" caliper, see #**1049**. Z3.

1679 American Plum, $16.50

Gracious Late Summer. Mandan 41-15 [(open-pollinated seedling of Emerald (*P. salicina* Burbank x *P. a.* Brittlewood) probably x Red Wing (*P. sal.* Burbank x *P. a. mollis* Wolf)]. Northern Great Plains Field Station, Mandan, ND, 1957. Oval-to-roundish yellow-orange fruit with coral-red mottling. Yellow-orange firm juicy sweet flesh. Freestone. Although there are still many plums I've yet to taste, this one rates with Purple Heart as one of my two favorites. A supremely excellent fresh-eating plum. Even with a heavy crop, it's hard to have any left over for its excellent sauce or jam. Upright spreading tree. Rare. Z3. **ME Grown.**

1685 Gracious, $16.50



Kaga Mid-Late Summer. *P. a.* seedling x *P. simonii*. NE Hansen introduction. SD Stn, 1909. Small 1" purple-black fruit. Good eating out of hand when they're dead ripe. Exceptional in jams and jellies due to the meatiness of the black flesh. This is not one of those plums that dissolves and dribbles down your cheek. The most profuse bloomer in Mark Fulford's plum collection, coming right in the middle of plum season. Mark considers it to be an excellent pollinator for other hybrid plums. It's also been reliably bearing in his Monroe, ME, orchard. I have it now and will test it in Palermo as well. Dense naturally dwarf tree grows only to about 10'. *Kaga* is the Sioux word for 'pitch a tent.' Z3. **ME Grown.**

1693 Kaga, $16.50

Kahinta Mid-Late Summer. Luther Burbank's *P. sal.* Apple x *P. a.* Terry. SD, 1912. Introduced by the great plant breeder NE Hansen using the same parentage as another excellent plum, Waneta (#**1755**), and similar to it. Large 1 1/2" roundish slightly pointed fruit, flattened at the stem end. Tart brilliant red-purple skin and tart but quite flavorful translucent yellow-orange flesh. Easy to peel; peeled fruit looks like a peeled tangerine. Or you can bite a small hole in the skin and suck out the juicy flesh. Clingstone. Very good for fresh eating or canning. Medium-sized spreading tree. Kept pruned, my 20-year-old tree remains about 8 feet tall. Bears more reliably than most other varieties in my orchard. *Kahinta* is the Sioux word for 'sweep.' Rare. Z3. **ME Grown.**

1695 Kahinta, $16.50

La Crescent Late Summer. Shiro x *P. a.* Howard Yellow. U Minn, 1923. Also known as **Golden La Crescent** or **Golden Minnesota**. Roundish 1 1/2" tender thin-skinned yellow fruit sometimes with pink blush. Tender yellow juicy flesh. Excellent quality, sweet aromatic and suggestive of apricots. Freestone. Upright spreading vigorous moderately productive tree. Z3. **ME Grown.**

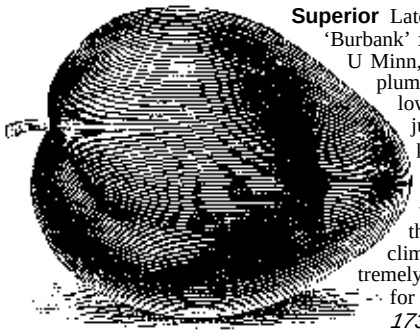
1700 La Crescent, $16.50

Pembina Late Summer. *P. sal.* Red June x *P. nigra* Assiniboine. Intro by NE Hansen, SD Exp Stn, 1923. Large pointy bright red fruit with bluish bloom. Sweet, firm but juicy, yellow flesh. Outstanding fresh eating. Bob Purvis, former North American Fruit Explorers president and longtime unofficial Fedco consultant, originally recommended it to me. I think this plum was one of the first varieties he said we *had* to offer. Bob was living in Alaska at that time and wrote that Pembina had withstood -43˚. Caught my interest. Probably hardy enough wherever you are. Z3. **ME Grown.**

1715 Pembina, $16.50

Purple Heart Late Summer. Unknown parentage, from Enfield, NH. Brought to the great plant breeder, Professor EM Meader, by a man who passed away before Meader could ascertain its origin. Becomes a favorite of anyone who grows it. Medium-sized fruit with red-purple skin and flesh and a delicate but full sweet flavor. Without a doubt, the most delicious plum we grow. You'll have to fend off ravenous neighbors when the Purple Hearts are ripe. Flowers are able to withstand spring frosts. Excellent shape, easy to pick, productive and healthy tree. Shows tip damage following colder winters. Not as hardy as other hybrids. Has shown susceptility to black knot in our orchard. Z4. **ME Grown.**

1725 Purple Heart , $16.50



Superior Late Summer. MN 194 [*P. sal.* 'Burbank' x 'Kaga' (*P. a.* x *P. simonii*)]. U Minn, 1933. Large conical dark red plum with a heavy bloom. Firm yellow flesh is smooth textured, juicy, clingstone. Frank Foltz, plum tester and owner of Northwind Nursery in Princeton, MN, wrote to me, "This is the closest thing to a peach that can be grown in our harsh climate. Very large, sweet, extremely juicy and of the best quality for fresh eating." Z3. **ME Grown.**

1735 Superior, $16.50

Tecumseh Midsummer. Shiro x *P. hortulana* Surprise. SD Stn, 1923. Not well known, and rarely sold anywhere, but considered by some enthusiasts to be one of NE Hansen's best introductions. David Bedford of the Minnesota Horticultural Research Station mentioned it to me as one he particularly liked. Excellent fresh eating. Round-ovate bright red fruit with a bluish bloom. Firm juicy subacid yellow flesh. Reliable and productive tree has unusual greyish-brown bark. Named in honor of Shawnee Chief Tecumseh who refused to sign the Treaty of Greenville in 1795 which would have given up his tribe's lands. Z3. **ME Grown.**

1740 Tecumseh, $16.50

Toka Late Summer. *P. a.* x *P. sim.* (Chinese apricot plum). Intro by NE Hansen, SD Exp Stn, 1911. Rosy red fruit, up to an 1 1/2" in diameter, mottled with darker purply red and covered with a faint bloom. Grower Don Johnson's comment was, "Talk about flavor: candy plum." Grower Ed Fackler called Toka the best-flavored plum he grows in his Indiana orchard. Sweet, distinctive, meaty and flavorful. Not real juicy. Extremely vigorous tree blooms heavily every year. Diligent pruning may be required to keep it from becoming a bit of a monster. Considered to be a good pollinator for other hybrid plums. Z3. **ME Grown.**

1745 Toka, $16.50

Underwood Midsummer. MN 91 (Shiro x *P. a.* Wyant). U Minn, 1920. Medium to large 2" fruit. Yellow skin with dull red overcoat. Firm sweet juicy golden-yellow freestone flesh, good for eating and cooking. Northern Maine grower Steve Miller considers it to be one of his most reliable bearers. Long picking season. Vigorous large spreading tree blooms early. Z3. **ME Grown.**

1750 Underwood, $16.50

Waneta Midsummer. *P. sal.* Apple x *P. a.* Terry. NE Hansen intro, SD Exp Stn, 1913. Released one year after Kahinta, and with the same parentage, when hybrid plums were an important and commercially viable crop. Named after a Yanktonai youth who won fame in the War of 1812 and later became a great chief. Large 1 1/2-2" reddish-maroon fruit, slightly less pointed than Kahinta (#**1695**). Sweet tender translucent orange flesh is very juicy but not dripping. Medium-thick skin, tart and easy to peel. Delicious overall taste. Hansen said of Waneta: "My belief is that in this variety I have combined the best points of the native and the Japanese plum. It is probably the largest [fruit] of over 10,000 seedlings." Early-blooming healthy open spreading tree bears reliably in our orchard. Z3. **ME Grown.**

1755 Waneta, $16.50

European plums

P. domestica Although also delicious fresh, this is the plum that is grown commercially for prunes. A true prune is a plum that can be dried without the pit fermenting. European plums produce smaller fruit and are generally not as hardy as the hybrid plums, though they can handle heavier soils and are less prone to brown rot. Unlike hybrids, they are prone to the fungal disease black knot, which looks like black chewing gum and appears on branches. While not necessarily fatal, it must be kept in check by removing and destroying infected branches. Trees grow upright and are usually trained to a central leader. Although **European plums are self-pollinating**, planting two different varieties will improve pollination.

We are currently testing several extremely hardy old Europeans from northern Maine and will offer some of them in the next few years. (3 1/2-6' trees)

Mount Royal Late Summer. Chance seedling, Outremont, Québec, before 1903. Popular plum in Québec and the northern U.S. for many years, also called **Mont-Royal**. Bears abundant annual crops of medium-sized roundish dark purple fruit, often considered the sweetest of the European plums. The flesh is greenish-yellow, juicy and firm. Use fresh, dried, frozen, canned and in preserves. Medium-sized tree is open, requires only moderate pruning. Z3. **ME Grown.**

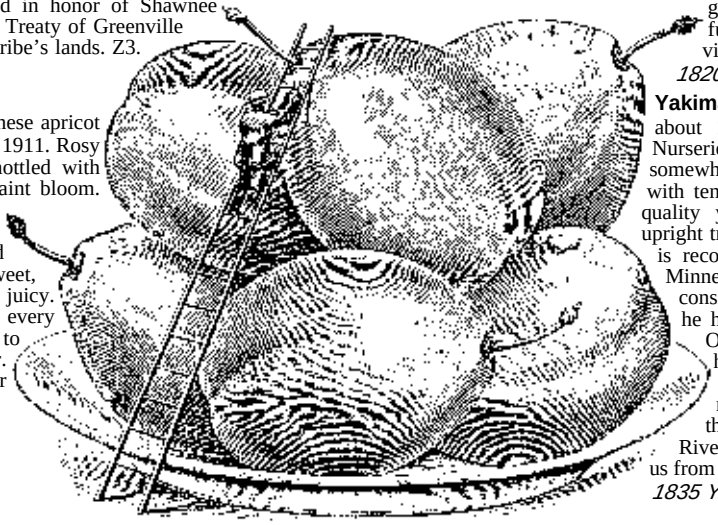
1780 Mount Royal, $16.50

Opal Summer. Oullins x Early Favorite. Alnarp, Sweden, 1948. Wisconsin plum breeder Brian Smith noted that Opal is the hardiest European plum available. Bob Purvis reported it to be hardy to about -33˚. Three years ago we sent twenty-five trees up to Alaska. Kevin Irvin, then vice president of the Alaska Pioneer Fruit Growers Assn, arranged the order. He wrote to me, "This plum is hardy in Anchorage Alaska and ripens dependably every year." One of the first of the Europeans to fruit in the season. Good quality, reddish-purple, medium-sized, round, semi-freestone. Firm yellow flesh. Medium-sized vigorous tree. Excellent cropper. Z3. **ME Grown.**

1785 Opal, $16.50

Stanley Late Summer. *P. d.* Agen x *P. d.* Grand Duke. NY Station, 1926. Most popular European prune plum in America. Excellent for cooking, eating, canning and drying. Medium-to-large fruits with dark blue skin. Green-yellow firm but tender juicy fine-grained sweet flesh. Reliably bearing fast-growing adaptable medium-to-large funnel-shaped tree produces healthy vigorous annual crops. Z3. **ME Grown.**

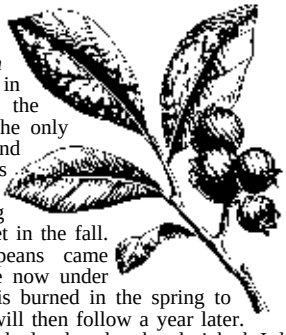
1820 Stanley, $16.50



Yakima Summer. Seedling discovered about 1902, introduced by Washington Nurseries, Bingen, WA, 1925. Large somewhat oblong bright mahogany-red fruit with tender sweet very firm and very high quality yellow flesh. Freestone. Vigorous upright tree. A second variety for pollination is recommended to increase productivity. Minnesota nurseryman Frank Foltz considers it the hardiest European type he has tested in his trials in Princeton. Oddly enough, it may be one of the hardiest European plums available in spite of its lowly beginnings 50 miles due west of Portland, OR, on the north shore of the Columbia River. Our original scionwood came to us from Frank. Z4. **ME Grown.**

1835 Yakima, $16.50

Small Fruits & Berries



Lowbush Blueberry *Vaccinium angustifolium* 6x24" Blueberry growers in Maine usually don't bother with the "lowbush" distinction; to them, this is the only true blueberry. Though both plants and berries are diminutive, the taste is supreme. Lustrous blue-green foliage in summer followed by an amazing combination of bronze, orange and scarlet in the fall. Grown in Maine long before Europeans came Downeast, where thousands of acres are now under production. Commercial blueberry land is burned in the spring to clear out the weed competition. A crop will then follow a year later. To speed harvesting, berries are usually raked rather than hand-picked. I do either, depending on my mood and the availability of my rake. You don't have to burn and rake to have a small-scale planting. Native to northeastern U.S. Z2. **ME Grown.** (2-yr transplants)

1900 Lowbush Blueberry, $9.00

> Lowbush Blueberries
> Woodsy dry poor acid soil (pH 4.0-5.2) is a prerequisite for lowbush blueberries. If you've got white pine, you're probably all set. Plant 12" apart each way and cultivate as a ground cover. Generally self-pollinating; other blueberries nearby will help ensure pollination. Full sun is best for maximum fruit production. Keep your patch weed free.

Highbush Blueberries *V. corymbosum* are native to North America. While usually associated with New Jersey and Michigan, many of Maine's lakes are lined with massive stands of highbush blueberries. Grazing the shore requires only time and a suitable vessel; I prefer kayak or canoe. The beautiful vigorous shrubs are extremely easy to grow at home, productive and reliable, with few disease or insect problems. By planting several varieties, you can harvest berries from early July through most of August. **Two varieties are required, three or more recommended, for pollination**. (12-30" 2-yr old plants)

Bluecrop Early-Midseason. GM 37 (Jersey x Pioneer) x CU-5 (Stanley x June), USDA, NJ, 1952. Medium-sized firm subacid fruit; very light blue berries of high dessert quality, resistant to cracking. Medium-large open clusters. Vigorous, upright 4-6' consistently productive bush. Ripens over a long season. May not be perfectly ripe when they first turn blue. Give them a few more days to reach full flavor before picking. Pruning will help maintain fruit size. Z4.

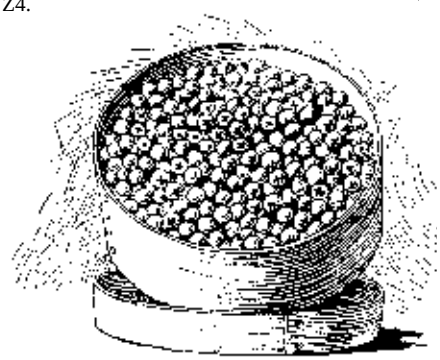
1920 Bluecrop, $8.00

Blueray Mid. GM 37 x CU-5, USDA, NJ, 1955. Large firm dark blue berries of high dessert quality in small clusters. Considered the best-tasting by nearly everyone who grows highbush blueberries. Very vigorous 4-6' bush with upright spreading habit. Considered the leading "you-pick" variety; consistently productive. Z4.

1925 Blueray, $8.00

Duke Early. G-100 (Ivanhoe x Earliblue) x 192-8 (E-30 x E-11), USDA, NJ, 1987. Recent release considered a big improvement over Earliblue, the standard early cultivar. Firm medium-sized light blue fruit with mild sweet flavor, excellent for fresh eating or processing. Vigorous upright high-yielding 4-6' bush. Long stems and loose clusters. Z4.

1935 Duke, $8.00

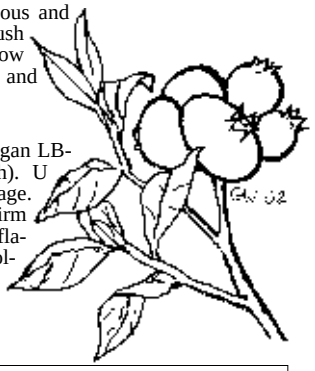


Jersey Mid-Late. Rubel x Grover. USDA, 1928. Medium-to-large dark blue berries in large loose clusters. Vigorous erect hardy bush, 5-7' tall. Productive, widely grown, adapted to a wide range of soils, highly praised, easy to grow and suited to the New England climate. We're very pleased to have this old standard back on the list. Z4.

1950 Jersey, $8.00

Northland Early. Berkeley x 19-H, Mich St U, 1967. Early highbush x lowbush type bears long loose clusters of medium-small dark blue berries with excellent wild flavor. Very vigorous and productive, 3' moderately spreading bush has limber branches which tolerate snow well. Good landscape, bird forage and dessert qualities. Hardy. Z3.

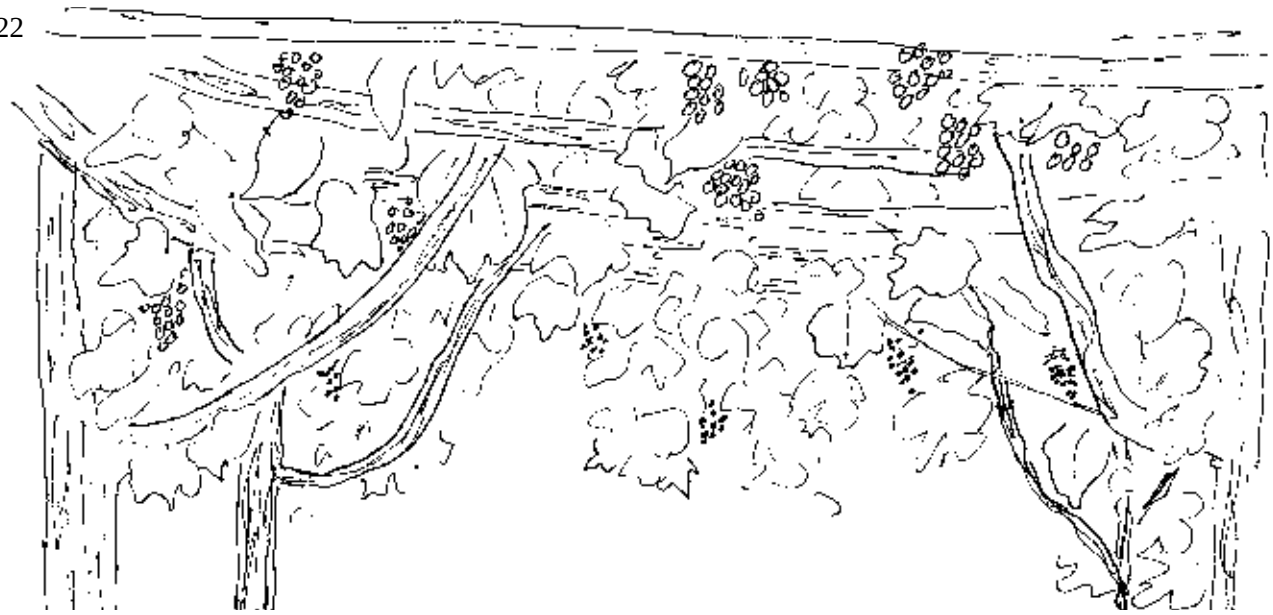
1965 Northland, $8.00



Patriot Early-Mid. US3 (Dixi x Michigan LB-1) x Earliblue (Stanley x Weymouth). U Maine, 1976. Partial lowbush parentage. Adaptable to many soil types. Large firm berries with good color and excellent flavor. Upright open spreading 4' bush. Tolerant or resistant to some strains of soil fungus. Hardy. Z3.

1975 Patriot, $8.00

> Highbush Blueberries are shallow-rooted and like light acid soil (pH 4.0-5.2), plenty of water, good drainage, and plenty of organic matter. They do not need much added nitrogen. Space them 3-6' apart, towards 3' for the shorter varieties, in rows 8-10' apart. If your soil is lacking acidity, add peat, sawdust, oakleaf mold, woods humus, sulfur, or ammonium sulfate (3 oz per bush).
>
> Dig a hole at least twice the size of the root ball. If you choose to use peat or sawdust, soak it and then mix it with soil at a one-to-one ratio. We suggest soaking roots in Agri-gel. Plant at the same depth as in the nursery (or slightly deeper). Do not let the roots dry out! Pack the soil firmly and water thoroughly. At planting time, prune off 1/3 to 1/2 of all growth. Plants require at least 1" water per week during the growing season. Fertilize modestly with a balanced 1-1-1 fertilizer in the spring. Remove all flowers for the first two years.
>
> Fruit is produced on vigorous one-year shoots off healthy canes. As canes age they become twiggy and less productive. Begin pruning after three years. Cut out weak or dead canes and dead tips. Each bush should be allowed to grow 6-10 canes varying in age from one to six years old. Thereafter, remove dead canes and those over 6 years old and encourage new replacement canes. Bushes with regular moderate pruning produce the most berries.
>
> Berries may need net protection from birds. One of the best arrangements I've seen is John Meader's netted "house" in Buckfield. He has about 40 bushes growing under a framework made of posts and 2x4s and completely covered in netting.
>
> Competition with grass may weaken and kill your blueberries. Mulch heavily (3-6" or more) every year with cardboard, wood chips, hay, sawdust, even old slab wood. When using sawdust you may want to compensate by adding extra nitrogen.



Grapes *Vitis* spp. Grapes are easy to grow and can bear plentifully even in northern New England. Our vines bear consistently and heavily almost every year. You can eat seeded varieties right off the vine if you don't mind "grape nuts."

Most grape varieties are bred from a combination of different species, *V. labrusca* and *V. vinifera* being the most important. *Labrusca* is native to the eastern U.S., has a wild tart musky (or foxy) flavor, and is hardy and disease-resistant. Concord is the best-known of the Labruscas. *Vinifera,* native to Europe, is extremely high quality and the most important wine grape in the world, but is not hardy and is prone to disease. Riesling and Chardonnay are the two hardiest pure *vinifera* grapes.

In central Maine, "very early" grapes begin ripening in mid-August, while "midseason" ripen mid-September. Late-season Concord, a standard elsewhere, does not ripen in many northern areas. **Most do not require a second cultivar for pollination.** (1-2 yr well-rooted vines)

Beta Midseason. *V. riparia* x Concord. Originated by Louis Suelter (pronounced *Sool*-ter) in Minn, 1881. Beta was named after his wife and is pronounced *Bett*-uh not *Bay*-tuh. Old standby, excellent for juice, jelly and jam. Good eating off the vine when completely ripe. Medium-sized black berries in moderately compact to loose clusters, ranging in size halfway between Delaware and Concord. Early to bloom, early to ripen. Vigorous healthy productive vines, extremely hardy. Z3.

2010 Beta Grape, $8.00

Bluebell Mid. MN 158 (Beta x unknown). Developed by JM Dorsey, U Minn, 1944. Our most popular seeded grape; it does everything well. Extremely hardy (-30˚F) labrusca type ripens 2-3 weeks earlier than Concord. Delicious sweet flavor makes them excellent for fresh eating, jelly and juice. Clusters of medium-sized dark berries with a heavy blue bloom. Strong, productive, vigorous—but not rampant—vine. Immune to most or all fungal diseases. Rare. Z3.

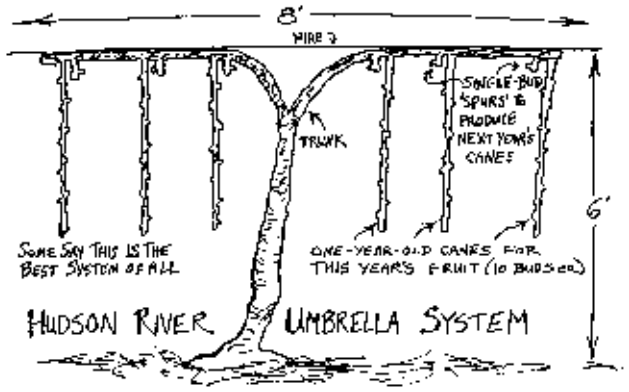
2020 Bluebell, $8.00

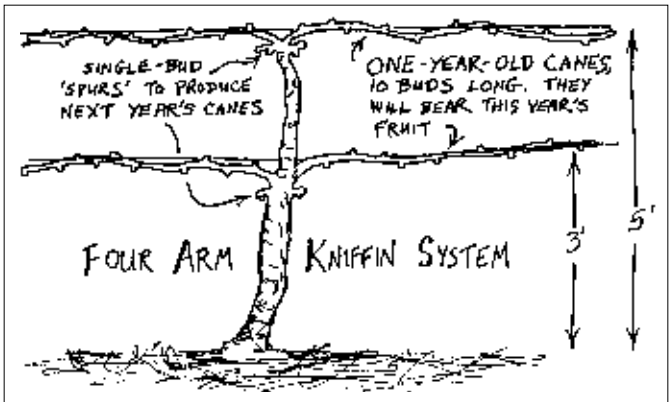
Grapes prefer soils with pH of 5.5-6.5. They can stand a lot of heat. Try planting them near a stone wall, a big boulder, or the south side of a building, in full sun. Full sun is important. Although soil should not be rich, it should be well-drained with plenty of organic matter. Space them 8-12' apart in rows 8-12' apart.

Spread the roots out, planting the crown even with the soil surface. Do not prune roots. Pack soil well. Water and mulch well. After frost danger has passed, prune vines back to 3-5 strong buds. In later years spread manure and mulch with hay or straw.

Grapes require annual pruning and a trellis or arbor, though some friends let them grow right up into trees. All systems for growing grapes involve removal of most growth in spring or late fall, encouraging new canes, as fruit is produced on these canes. There are many systems for training grapes. Some are suited to laying down and covering tender varieties over winter. Any good book on grape growing will show you several options. We suggest the Hudson River Umbrella or the Four-arm Kniffin system.

Grapes rated for Zone 5 can be grown in Zones 3 and 4. To prevent winter injury, remove the vine from the trellis in fall, lay it on the ground, and bury with just enough soil to cover. This task is neither difficult nor time-consuming, and does work.


8'
WIRE
TRUNK
SINGLE-BUD 'SPURS' TO PRODUCE NEXT YEAR'S CANES
6'
SOME SAY THIS IS THE BEST SYSTEM OF ALL
ONE-YEAR-OLD CANES FOR THIS YEAR'S FRUIT (10 BUDS OR SO)
HUDSON RIVER UMBRELLA SYSTEM


SINGLE-BUD 'SPURS' TO PRODUCE NEXT YEAR'S CANES
ONE-YEAR-OLD CANES, 10 BUDS LONG. THEY WILL BEAR THIS YEAR'S FRUIT
3'
5'
FOUR ARM KNIFFIN SYSTEM

Pruning Grapes in the Four-Arm Kniffin System

First year: Cut plant back when planting to a single stem, 6" long with two to three buds, after the last danger of frost has passed.

Second year: Set up two wires, 3' and 5' high, stretched between posts. Cut plant back to a single stem, 6 feet long and tie it to the top wire. Leave 4-6 buds near each wire and remove others.

Third year: Select 8 canes, 4 for each wire, and remove the rest. Tie two canes to each wire, one in each direction. Cut these four canes back to 10 buds each. Cut the remaining four canes back to two buds each.

Later years: In the spring, remove last year's fruiting canes. Select eight new canes. Cut 4 of them to 10 buds each, and tie them to your wires. Cut the remaining four back to two buds each. These will produce next year's fruiting canes. Remove all other canes. The number of buds left on the fruiting canes may be adjusted to encourage more fruit or larger size.

Growing Grapes on an Arbor

Train one or more vines onto an arbor or gazebo. Encourage several permanent arms off the trunk and then every winter remove 70-90% of the the past summer's growth. Next summer new fruiting canes will grow off your permanent arms.

Frontenac Mid-Late. MN1047 *V. riparia* 'RIP 89' x Landot 4511. U Minn, about 1995. An excellent new hardy red wine grape from the University of Minnesota's grape breeding project. No labrusca or riparia flavor. Wine has been winning acclaim throughout the Upper Midwest and has even been mistaken for Pinot Noir by reputable wine judges. Very large loose clusters of small berries. Vigorous very productive largely disease-free vines. In the Minnesota Grape Growers Association's *Notes from the North*, John Marshall writes, "Though the sugar may rise to impressive levels early in September, the grapes are not nearly ripe. Ignore the sugar levels and wait until September 20th. The acid will drop and the wonderful black cherry flavors that will make this grape famous will multiply." Maine grape researcher and tester Jerry Rodman adds, "Frontenac has made some good wines, but is very high in acid and is probably best for areas with high heat accumulation (which helps to lower its acid)." Z4/5.

2075 Frontenac, $8.00

Kay Gray Mid. ES217 (MN78 x Golden Muscat) x open-pollinated (Onaka?) Elmer Swenson introduction, Osceola, WI, 1981. Medium-sized golden-white slip-skin berries in medium-sized tight clusters. Mild sweet fruity flavor. For dessert or juice and a decent wine for blending. Some years it will produce an exceptional varietal wine on its own. Extremely good disease resistance. Very reliable moderately vigorous productive vine. Very hardy. Z3.

2090 Kay Gray, $8.00

King of the North Mid. *V. r.* x Concord-type. Madison, WI. Dark-skinned table and wine grape originally named and offered by Jung's Nursery many years ago. Recently rediscovered and gaining many enthusiasts. According to Minnesota grower and winemaker John Marshall, King of the North is the one variety he recommends for both a good table grape and a decent red "Concord style" wine. In a recent email he wrote to me that it's "very delicious particularly as a home wine although it is also meeting success as a commercial wine grape." Hardier and better tasting than Beta, also produces light red sweet tasty juice. Ripens slightly later than Bluebell which can be a problem in colder areas. Z3. **ME Grown.**

2096 King of the North, $8.00

Prairie Star Mid. ES 3-24-7 (ES 2-7-13 x ES 2-8-1) Swenson intro, 1984. Blocky long slightly loose clusters of medium-sized white fruit. Excellent sugar and acidity for winemaking. Makes a nice classy wine with no foxy flavor. Tom Plocher and Bob Parke reported in *Notes from the North* that the wine has "a fullness in the mouth and finish that is uncommon among our hybrids....In some years it develops a delicate floral nose that allows it to stand as a single variety wine. In most years however, Prairie Star is an ideal blending component to add body and finish to thin white wines." A favorite of Jerry Rodman who has tested dozens of grape varieties at his Litchfield, ME, vineyard. Prefers heavier fertile soils. Disease-resistant and very hardy. Z3/4.

2120 Prairie Star, $8.00

Reliance Seedless Very Early. Arkansas 1163 (Ontario x Suffolk Red). Arkansas Stn, 1982. Probably the highest-quality seedless grape for the North. Large loose clusters of tender melting sweet pinkish-red fruit with a strawberry-like flavor. Fresh eating or juice. Stores well in root cellar for 1-2 months. Seems perfectly hardy in our Zone 4 trials. Lay vines down for the winter in coldest areas. Extraordinarily vigorous disease-resistant vines. Z4/5.

2125 Reliance Seedless, $8.00

St. Croix Mid. ES 242 (ES 283 x ES 193) Swenson intro, Osceola, WI. Juicy low-acid medium-sized blue grapes in medium-sized bunches. High quality pale red juice and vinifera-type fruity dry red wine. Very popular as the primary variety in blended red wines produced by Minnesota's small but thriving wine industry. Disease resistant. Extremely hardy. Z3/4.

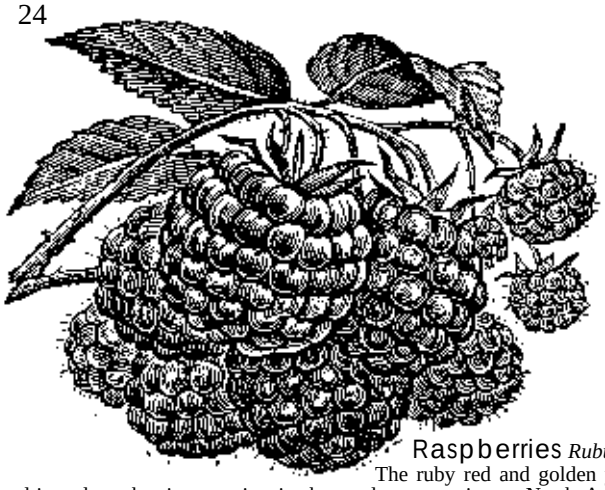
2135 St. Croix, $8.00

Seyval Blanc Mid-Late. Seyve-Villard 5276 [Seibel 4995 x Rayon d'Or (Seibel 4986)] St. Vallier, Drôme, France, about 1921. French *vinifera* hybrid whose parents include *V. vinifera*, *V. rupestris*, and *V. aestivalis* var. *lincecumii*. One of the most widely planted white wine grapes in the eastern U.S. Small round golden-yellow fruit in large compact clusters with cylindrical shoulders. Upright moderately vigorous highly productive vine. Makes a light fruity dry aromatic Chardonnay-type white wine. Jerry Rodman says Seyval "is known to yield good wines but is fairly tender, not early ripening, and tends to over-crop (requires cluster thinning)." Overcropping can also decrease hardiness. In Zone 4, lay canes down and cover with soil during the winter. Good disease resistance although some susceptibility to fungal diseases. Z5.

2150 Seyval Blanc, $8.00

Valiant Early. Fredonia x *V. r.* SD Stn, 1982. As hardy as Beta and considerably better tasting. Medium-sized blue-black table grape similar to Fredonia makes very good eating right off the vine, excellent juice and jelly. Reliable, productive, free of astringency. Tight 4" clusters, frequently with a "shoulder." Extremely hardy. Precocious; may need thinning in early years. Susceptible to downy mildew and black rot. Very popular in the upper midwest where the summers are consistently drier than ours, although it does very well here in dry years. Z3/4. **ME Grown.**

2170 Valiant, $8.00



Raspberries *Rubus* spp.

The ruby red and golden yellow cultivated raspberries growing in the garden are native to North America, Europe and Asia. They are usually identified as *R. ideaus* or *R. ideaus* var *stirgosus*. Hyland and Steinmetz's *Trees and Other Woody Plants of Maine* lists 53 different *Rubus* species and subspecies.

Everbearing types bear on first-year canes or primocanes. We don't offer Heritage, a popular producer of high-quality fruit, because it ripens too late for growers in Zone 4 and cold areas of Zone 5.

Summer-bearing cultivars bear on second-year canes or floricanes. Harvest leaves for medicinal use from first-year canes of summer-bearing varieties. A leaf and fruit vinegar is very high in minerals, and the leaf tea makes a great tonic for both uterus and prostate.

A second variety is not needed for pollination. Prior to planting, soak canes in Agri-gel, in the sidebar and also available in the Organic Growers Supply section of the Seed catalog. (well-rooted bare-root canes)

August Red Late. NH R7 [Durham x NH 102 (dwarf F2 seedling x Taylor)] x NY 287 [NY 18810 (Marcy x Indian Summer) x NY 20990 (*R. strigosus* selection)] Developed by EM Meader, UNH, 1973. An everbearing variety that is the one hope when no other raspberry will survive. Can be killed back to the snow line and will still bear heavily that summer. Medium-large crimson fruit has excellent flavor. Compact erect 3' bush bears earlier than other everbearers. Mow them down to the ground in late fall. They come back the next spring and produce in midsummer, about August 10th in central Maine. Z3. **ME Grown.**

2220 August Red, bundle of 10, $24.00

Fall Gold Late. (Taylor x Korean Tree Berry) Developed by EM Meader, UNH. Sister of Fall Red. At last, a hardy yellow-fruiting everbearing variety. Exceptionally sweet large round golden-yellow fruit. Moderately firm and juicy. Tall sturdy canes rarely need staking. Moderately vigorous, high yielding over a long period. Excellent disease resistance and hardiness. Hardy to -25˚. Will bear on first year (primocanes) or second year (floricanes). Mow to the ground after fruiting if you like. Z4. **ME Grown.**

2260 Fall Gold, bundle of 10, $24.00

Raspberries and Blackberries

Cane fruits have shallow perennial roots and biennial fruiting canes. They prefer full sun, good air circulation and well-drained soil, rich in organic matter, with pH of 5.8-6.2. Avoid soils where tomatoes, peppers, potatoes, strawberries or wild brambles have grown because they all are subject to verticillium wilt, which may remain in the soil. Plant rows 6-12' apart to facilitate cultivation. See below for planting distances. Before planting, work into the soil 15 bushels dry manure or 10 bushels fresh manure per 100 sq feet. A well-kept patch can last for 10-20 years.

Be sure each hole is large enough to spread out the roots. Do not allow the fine roots to dry out. We suggest soaking roots in Agri-gel for 1-2 hours before planting. Plant 1-2" deeper than in the nursery and then cut the canes off at ground level.

Cane fruits should be trellised between two temporary or permanent wires about 3-4' off the ground and 18-36" apart. Mulch with a thick layer of woodchips or sawdust. Fertilize liberally each spring with up to 100 lbs manure or compost, 8 lbs bloodmeal, or 14 lbs cottonseed meal per 100 foot row. Plants require 2" water per week during the growing season.

• Summer-bearing varieties: Space 2' apart. After harvest, prune to the ground the canes that carried fruit or remove them the following spring. Thin the fresh first year canes to about 3-4" apart. They will bear fruit next year. During the growing season cut back canes to 5' if they are bending over severely.

• Purple and black raspberries: Plant in hills 3' apart. Basic pruning is same as summer-bearing varieties. As they fill in, thin to 5-8 canes per hill. During the early summer, pinch back tip of first year canes to 2½-3' tall. This will encourage lateral fruiting branches. These will need very little, if any, support and may not require trellising. In the following spring, cut these fruiting laterals back to 8-12 buds.

• Everbearing Raspberries: Plant 9-15" apart. Cut all canes to the ground in late fall after leaves drop, or in early spring; first-year canes will fruit in mid-late summer.

• Space blackberries 3-4' apart.

Nova Mid-season. Southland x Boyne. Kentville, Nova Scotia, 1981. This year we've decided to offer this relatively recent introduction for our midseason red. Boyne will have to sit it out for at least a season. In our trials Nova appears to be even hardier than Boyne with fruit quality as good as or better than Boyne. Medium-sized firm somewhat acid bright red fruit. Summer-bearing. Upright productive minimally spiny canes produce long fruiting laterals which make the fruit easy to pick. Z3.

2325 Nova, bundle of 10, $15.50
2326 Nova, bundle of 25, $25.50

Prelude Early. NY 1009. NY St Exp Stn. We've decided to offer this newly developed red raspberry after several years of trials at John and Pat Meader's Maine Hardy Nursery in Buckfield. John wrote, "I'd strongly recommend Prelude. It showed hardiness equal to Boyne last winter [2002-03] and fruits the earliest of all varieties I've observed (over 30).… I'd readily substitute it for Killarney, since Killarney's fruiting period pretty much overlaps Boyne. Killarney is not as productive as Boyne, and Killarney's fruit tend to crumble. Prelude would preceed Boyne nicely; it has good fruit (taste, firmness, size) and seems quite productive; it fruits well over two full weeks." Firm red medium-sized fruit is easy to see and pick, ripens in central Maine in early-mid July. Can be grown as a primocane type or floricane type. Suckers freely. Z4.

2330 Prelude, bundle of 10, $15.50
2331 Prelude, bundle of 25, $25.50

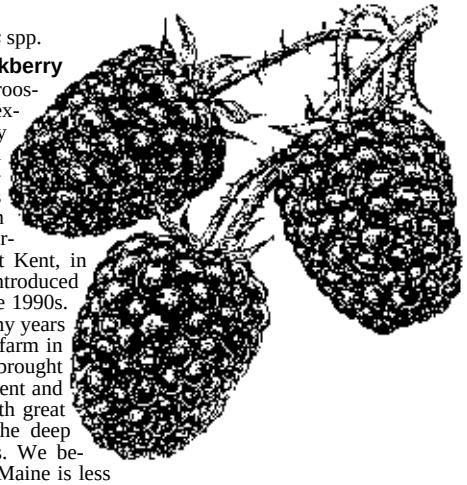
Royalty Purple Mid. (Cumberland x Newburgh) x (Newburgh x Indian Summer). NY Stn, 1982. Distinctly flavored cohesive fairly firm large berries make outstanding jam and jelly, and even better fresh eating. Their flavor is different from the red raspberries, with a hint of black-raspberry. Extremely robust non-suckering plants are very productive and open-formed; the berries are right in your face and easy to pick. Ready to harvest when they are deep purple, somewhat later than the reds. Summer-bearing. Plant in hills (see sidebar). Usually considered Zone 4 but is proving itself into Zone 3 with occasional slight tip dieback. Z3/4.

2340 Royalty Purple, bundle of 10, $28.00

Taylor Mid. Newman x Lloyd George. NY Stn, 1935. Often considered the best-flavored raspberry, as well as one of the hardiest, though suffers minor frost damage in Zone 3. Large pinkish-red fruits are firm, long, conic. Vigorous highly productive sturdy canes can grow up to 9', though usually need no support. Summer-bearer adaptable for "you-pick" and commercial use. In some places virus has caused canes to die out after a few years. Z4.

2360 Taylor, bundle of 10, $15.50
2361 Taylor, bundle of 25, $25.50

Blackberries *Rubus* spp.



Fort Kent King Blackberry Unknown parentage, Aroostook County, ME. An extremely hardy blackberry of commercial potential for those who have planted "hardy" blackberries in the past and have been disappointed. Plant explorer Garfield King of Fort Kent, in northernmost Maine, introduced this berry to us in the late 1990s. Garfield had found it many years earlier on an abandoned farm in central Aroostook. He brought some plants up to Fort Kent and grew them in Zone 3 with great success. But up there, the deep snow protects the plants. We began to test them around Maine is less hospitable locations six years ago and since 2002 have been testing them around the country. Although those trials are still ongoing, all of the growers have reported them as being fully hardy. On my farm, despite two weeks of -20˚ and bare ground I will have a large crop this summer. They are also bearing in northern Minnesota after -40˚ last winter. The canes are very productive, thorny and may tend to crawl during the first years. They will eventually stand erect. The fruit is generally ¾-1" long and the quality is very good to excellent. Our southernmost grower (on Long Island) reported they are "susceptible to wet weather fungus." I have not noticed that up here. Plant them 3-4' apart in good garden soil with lots of sun. They enjoy good air drainage but do not like desiccating winter wind. Stake if necessary. Cut out spent (dead) canes each year. Head back the plants during the summer to a manageable height (they will grow to be 6' or taller). **ME Grown.**

2390 Fort Kent King, bundle of 3, $10.00

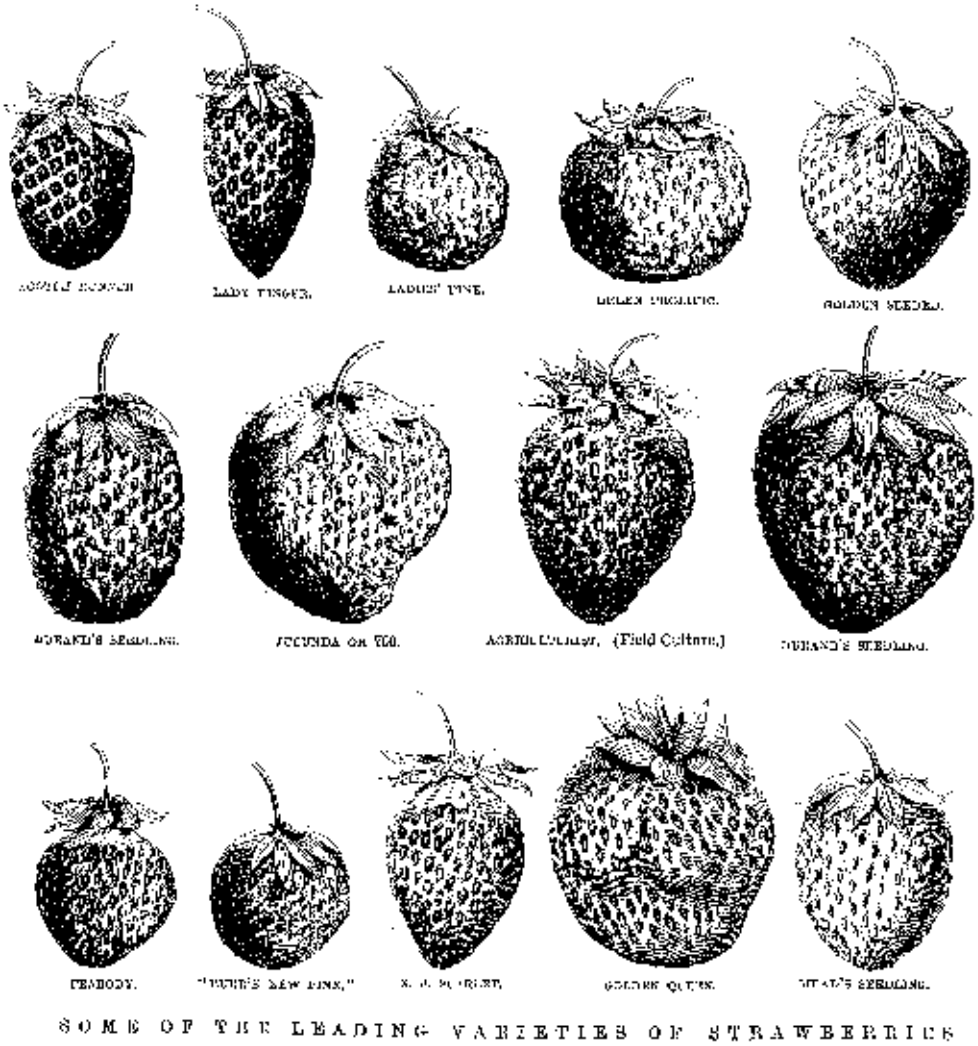
Agri-gel A hydrogel formulation which absorbs and holds water. The swollen crystals adhere to plant roots, reducing transplant shock. Safe, non-toxic, easy to use. Useful for garden seedlings as well as woody plants. Highly recommended for raspberries and conifers. Half-ounce packet mixed with one to three gallons of water will treat up to 100 cane plants, or 50 trees and shrubs. ½ oz.

7510 Agri-gel, $2.00

Strawberries *Fragaria* x *ananassa*

A major highlight of every summer is picking Sparkles. Is that not heaven? Although no one knows where the common name *strawberry* originated, idle speculation has it that it comes from the practice of putting straw down between the rows for pickers to sit on while they sample the fruit and catch up with each other. Technically not berries or fruits at all, strawberries are enlarged fleshy receptacles. The fruits are those tiny embedded "seeds" (they're not seeds, but achenes which have seeds in them). Modern strawberries, developed about 1830, are a hybrid of *F. chiloensis* (native of Chile) and *F. virginiana* (native of North America).

50 plants will plant from 150-250'. (virus-free bare-root stock)



SOME OF THE LEADING VARIETIES OF STRAWBERRIES

Earliglow Early. MdUS 3861 (Fairland x Midland) x (Redglow x Surecrop). Medium-sized berries. Best for fresh eating and freezing. Excellent flavor for an early berry. Called the best flavored of all varieties by Barbara Bowling in *The Berry Growers Companion*. Also a favorite of local strawberry grower Shaun Keenan. Resistant to red stele and verticillium wilt. Z3.

2410 Earliglow, bundle of 50, $11.00

Jewel Mid-Late. NY 1324 [(Senga Sengana x NY E-58) x Holiday] NY Station, 1985. Added to our list last year at the suggestion of Shaun Keenan at Sand Hill Farm in Somerville. Shaun even went so far as to say that Jewel tasted almost as good as Sparkle. Although I don't think I'd go quite that far, I was very impressed with the berry. Large bright red glossy fruit is firm, sweet and slightly aromatic. Unlike Sparkle, Earliglow and many other varieties, it keeps its size all season. Extremely popular with commercial growers. Good freezing quality. Low incidence of fruit rots and foliar diseases. Not resistant to verticillium or red stele. Z4.

2420 Jewel, bundle of 50, $11.00

Northeaster Early. MdUS 4787 (MdUS 4380 x Holiday). USDA, 1996. Very large firm fruit with strong aromatic flavor is productive and hardy. Recent introduction that shows excellent promise throughout much of New England. Has even done well in our trials in Aroostook County. Ripens about the same time as Earliglow. Recommended both for homeowners and for large plantings. Resistant to soil diseases and tolerant to foliage disease. Very hardy. Z3.

2424 Northeaster, bundle of 50, $11.00

Sparkle Mid-Late. Fairfax x Aberdeen. NJ Ag Exp Stn, 1942. Although not a favorite with commercial growers due to moderate crop size and smaller berries, I've yet to taste a strawberry that comes even remotely close to Sparkle. To me, they possess a flavor that can only be described as the essence of strawberry. The best in an early year, the best in a late year, the best this year, last year, every year. This is *the* berry if you want to eat the perfect strawberry. Soft berries make delicious fresh eating and are also excellent for jams and freezing. First fruit set is large; the rest are small. Resistant to most strains of red stele. Blooms late and is rarely affected by spring frost. Z3.

2430 Sparkle, bundle of 50, $11.00

Tristar EB 18 x MdUS 4258, USDA, MD, 1981. Everbearing "day-neutral" strawberry sets flower buds regardless of day length, fruiting all summer and into fall. Remove flower buds for the first six weeks after planting and you'll still get a crop the first year. Medium-sized firm deep-red berries of excellent quality and flavor. Resistant to red stele and verticillium wilt. Z4.

2442 Tristar, bundle of 50, $16.50

Strawberries

Keep cold or refrigerate between arrival and planting. Strawberries require good air drainage, well-drained fertile soil with pH of 5.8-6.2, thick mulch and full sun. Avoid soils where tomatoes, peppers or potatoes have grown in the past 4 years. Plant strawberries at the same depth as they were in the nursery, with the middle of the crown at soil level. Keep your patch free of weeds. They require 3/4-1" water per week during April, May, August, September and October. Mulch with hay or straw in late fall to protect plants over winter. In the spring, pull mulch off plants and place between rows where it will keep fruit dry and clean during the summer. It can also be raked back over the plants if frost threatens flower buds. Floating rowcover may also be used for winter and frost protection.

June-Bearing Strawberries

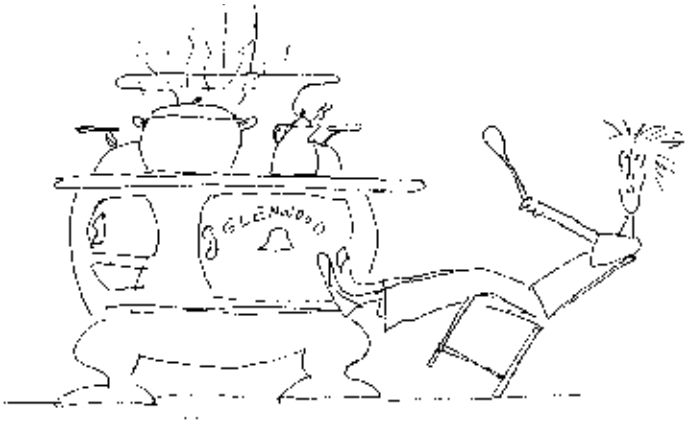
Matted Row system: Set plants 12-18" apart in rows 3' apart. Allow plants to produce runners freely and fill in the row. Remove all flowers the first year. Harvest berries the second summer. Immediately after harvest, fertilize liberally with compost or aged manure and renovate the row. By hand or with a tiller, narrow the row to 12" wide. Thin plants to 4-5" apart within the row. By this method a bed can last about 5 years. Then plow it under and start again.

Day-Neutral Strawberries

(like Tristar) flower regardless of day length as long as temperatures are between 35 and 85°, and produce fruit from June to October. They are also uncommonly productive—about one pound of fruit per plant the first year, and slightly less the second year. Productivity peaks in August the first year. The second year, berry size decreases in the hottest weather and increases in cooler weather.

They are heavy feeders and benefit from 3-4" of manure worked 4-6" into the soil prior to planting, and monthly side-dressing of manure throughout the season. Plant 5-9" apart. Mulch with black plastic or thick straw immediately after planting. Remove flowers for the first six weeks, and remove all runners the first season. Mulch in late fall. Side-dress with manure monthly during the second season beginning in May. Till under after the second year and begin again.

More Edibles



Actinidia arguta **Hardy Kiwi** Productive climbing vine that produces delicious grape-sized kiwi fruits in late summer. Unlike supermarket kiwis, the skin is smooth and edible. Easy to grow in rich well-drained soils. Will begin producing in 5-9 years. No significant pest or disease problems. Some growers have been frustrated with vines that have proven unproductive or not hardy. After consulting several of Maine's long-time growers, we collected cuttings from fruiting combinations here in central Maine. We think you'll be pleased with our choices. We'll be offering more varieties in the years to come. Both male and female plants required for fruit. One male will pollinate at least three females. Z4. (well-rooted 3-year-old transplants)

A. a. **Ananasnaya** (female) Summer. I.V. Michurin introduction, USSR, 1972. May be a hybrid of *A. arguta* and *A. kolomikta*. Oval fruit, about 1 1/2" long. Dark green smooth skin. Light green juicy flesh with a pineapple scent and flavor. *Ananasnaya* means pineapple-like. Extremely hardy. **ME Grown.**

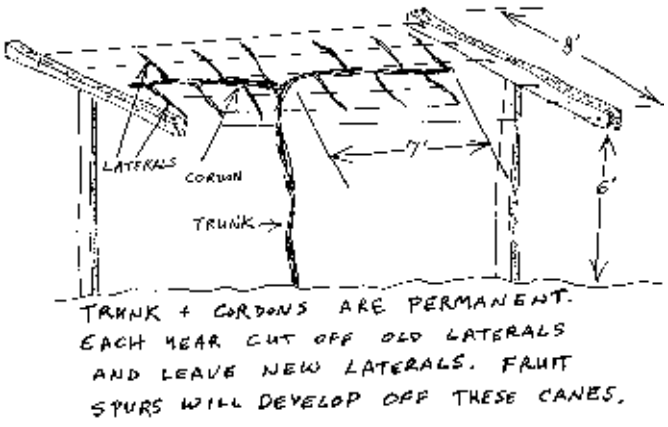
2444 Ananasnaya Kiwi, $12.00

A. a. **Geneva #2** (female) Late Summer-Early Fall. George Slate, NY Ag Exp Stn, Geneva, NY. Small-medium fruit, about 1" in diameter. Very vigorous and productive. Good sweet flavor. **ME Grown.**

2445 Geneva #2 Kiwi, $12.00

A. a. **Cornell** (non-fruiting male) NY Ag Exp Stn, Geneva, NY. Very hardy reliable pollinator. Will pollinate both the above female kiwis. Very vigorous grower. **ME Grown.**

2452 Cornell Kiwi, $12.00



Kiwis are dioecious vines, meaning you must plant a male plant to pollinate the fruiting female plants. They are also extremely vigorous and require a rugged trellis or arbor and heavy pruning. Plant vines 10' apart each way in moderately rich moist, but well-drained, soil (pH 5.0-6.5). Plant a male plant within 30' of any female to be pollinated. One male will pollinate several females. Although the plants are quite hardy, the flowers and foliage are frost sensitive. Planting with a northern exposure will delay budding-out in spring and reduce risk of frost damage. Protecting from winter winds and intense winter sun is also recommended. Mulch with hay or wood chips. On poor sites fertilize with compost annually.

On a trellis: Train a single trunk to the trellis wires and then train two permanent 7-10' cordons (arms) off the trunk. Each winter remove at least 70% of old growth, leaving a dozen or so one-year-old laterals. That year's fruit will develop on fruit spurs growing off these one-year old canes (laterals). On extremely rampant vines summer pruning may be required to keep the vines from choking out your farm.

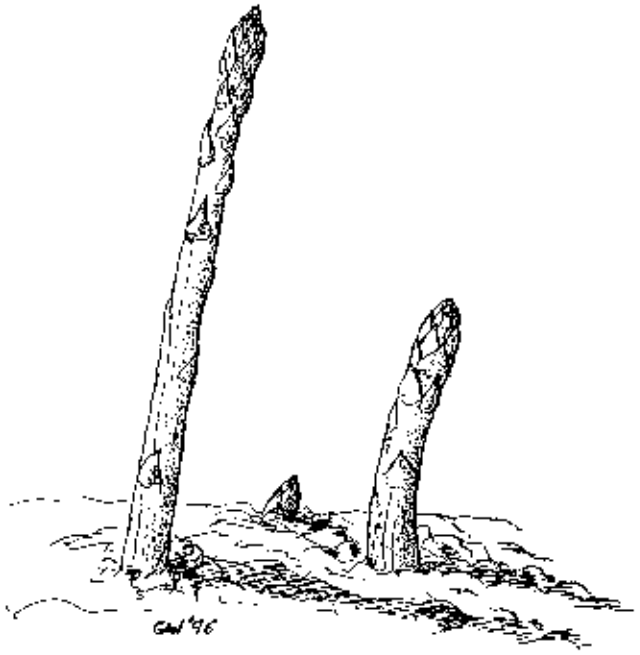
On an arbor or gazebo: Once established, prune 70% of the old growth each year and leave some new canes for this year's fruiting.

Armoracia rusticana **'Big Top' Horseradish** Exceptionally vigorous perennial with large dock-like leaves and spicy hot roots, savored for centuries for their culinary and medicinal qualities. 'Big Top' is a newer strain with disease resistance. Deep taproot with numerous shallow runner roots. Plant it where you want it because you may never get it all out. Prefers rich soil. Leaves can be cooked as greens. Harvest roots in the fall. Plant with the slanted cut down and the flat side up. Native to northern Europe. Z3. (#1 roots)

2456 Horseradish, bundle of 5, $8.50

Asparagus officinalis **'Jersey King' Asparagus** Early. Rutgers U. Because wages account for about 70% of the cost of producing the tasty spears for market, asparagus production has gone global. Even though California asparagus growers pay workers minimum wage, they can't compete with overseas producers. As with many other crops, domestic asparagus may become a thing of the past. It may not be long before you *have* to grow your own if you want it grown in the USA. Jersey King is one of the newer all-male hybrids which are 2-3 times more productive than the open-pollinated types. Excellent tolerance to asparagus rust and fusarium crown rot. Produces high yields of large-diameter tender spears. Z4. (large-rooted 1-yr crowns)

2464 Jersey King Asparagus, bundle of 25, $12.00
2465 Jersey King Asparagus, bundle of 50, $19.00



A. o. **'Purple Passion' Asparagus** Early. Developed from the old Italian heirloom *Violetto di Albenga*. Brian Benson introduction. Very large deep purple stalk with a creamy white interior. Sweeter and less stringy than its green counterparts, meaning you can use more of the spear. Tender enough to eat raw in salads. Turns green when cooked. (large-rooted 1-yr crowns)

2477 Purple Passion Asparagus, bundle of 25, $12.00

Asparagus requires fertile soil with pH 6.8-7.2 and high levels of phosphorous. It doesn't like weeds. Plant 14-18" apart, 6-10" deep, in trenches 4' apart. Or dig your trenches somewhat deeper and fill the bottom with 4" of compost and rotted manure. Lay plants with crown up and cover with 2" of soil. As young shoots grow, add soil slowly just covering the shoots until the trench is full. In late fall, remove dead stalks and mulch with 3" of manure.

Second summer: Add lime as needed and dig in rock fertilizers and nitrogen fertilizer as needed. Control weeds but do not injure crowns.

Later years: Same routine but increase fertilizer. Be sure to leave some spears each year to grow stalks that will support the roots and give you more spears next year. Keep the bed weed free and mulched heavily.

New research shows that asparagus can be selectively harvested for 2 weeks during the second growing season, for 4 weeks in the third, and a full season thereafter. We recommend caution in harvesting any but the largest shoots from vigorous plants before the third or fourth season as the young plants need to establish themselves.

Index

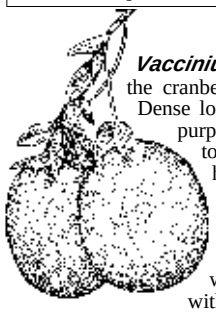
***Rheum rhabarbarum* 'MacDonald' Rhubarb** MacDonald College, Quebec. A perennial herb of the buckwheat family whose clumps of juicy acid leaf stalks have been a northern food staple every spring for thousands of years. Most famous these days for pies and wine, but also great for sauce, breads and juice. MacDonald has extremely vigorous productive upright large tender stalks, deep red inside and out. Leaves not edible. Native to Russia. Z3. (#1 crowns)

2482 MacDonald Rhubarb, bundle of 2, $8.50

Rhubarb

Plant the top of the root division level with the surface in well-prepared well-drained rich slightly acid soil (pH 5.5-6.5) and a bushel of well-rotted manure or compost under each crown. When plants are established, fertilize liberally with manure and balanced garden fertilizer or compost every spring, as it's a heavy feeder. Harvest for four weeks two years after planting. Thereafter you can harvest for 8-10 weeks each year. Never remove more than 2/3 of the stalks from a plant.

Every ten years or so, divide plants in early spring, leaving about 1/3 of the crown in place. Cut up the remainder into fist-sized pieces and replant.



***Vaccinium macrocarpon* American Cranberry** This is the cranberry of delicious holiday sauces, bread and jelly. Dense low 2-12" lustrous evergreen ground cover, reddish purple in fall and loaded with 1/2" light yellow to orange to reddish-maroon berries that color more after harvest. Handpick or rake like blueberries before hard frost. Use fresh or freeze, or store in a cool basement or root cellar for months. Berries a well-known cystitis remedy. Requires acidic soil, Native to northeastern U.S. and Canada. 10 plants will fill a 5x5' bed. Z2. **ME Grown.** (well-rooted plants with 3-4 runners)

2496 American Cranberry, bundle of 10, $15.00

American Cranberries are shallow-rooted and require light acid soil (pH 4.0-5.5), preferably cool, moist and high in organic matter, similar to soils in which blueberries grow well, though will grow in dry locations. Often flooded for frost protection and convenience in commercial operations, but not necessary in home plots. Plant them in spring once the ground can be worked. They do well in a bed or in a naturalized setting. Instructions are for a 5 x 5' bed (10 plants).

For acidic "blueberry" soils: If you're fortunate to have a site where blueberries grow naturally, clear a spot of vegetation, cultivate the soil, add some peat and sand if you like, and you're ready to plant.

Sandy soils: Remove soil 10" deep and mix soil with 2 bales of damp peat moss. To acidify the soil, also mix in 1/4 lb sulfur. Replace mixture in bed and cover with 2" of sand.

Clay or silty soils: Remove soil 10" deep and place it around the edge of the bed as a berm. Replace the soil with 8" of moist peat moss (about 2 bales). Add 2" of sand and mix it slightly with the peat. To acidify the soil, also mix in 1/4 lb sulfur. Cover with an additional 2" of sand.

Plant cranberries 12" apart, so the roots are into the peat and the sand is covering the lower portion of the stems.

Remove all weeds as needed. Water the plants weekly so that the peat is moist but not saturated. Add nitrogen at a rate of 1/3-1 lb (or 20-50 pounds of manure) per 100 sq feet each year. No pesticides should be necessary.

Handpick berries before first hard frost when the berries are red.

In late fall cover the bed to protect the plants from the drying effect of winter winds. Use a mulch of leaves or pine needles; or cover with polyester row cover and then clear plastic; or cover with row cover and then plenty of leaves. If you use row cover or plastic, you may want to bait for mice under the plastic.

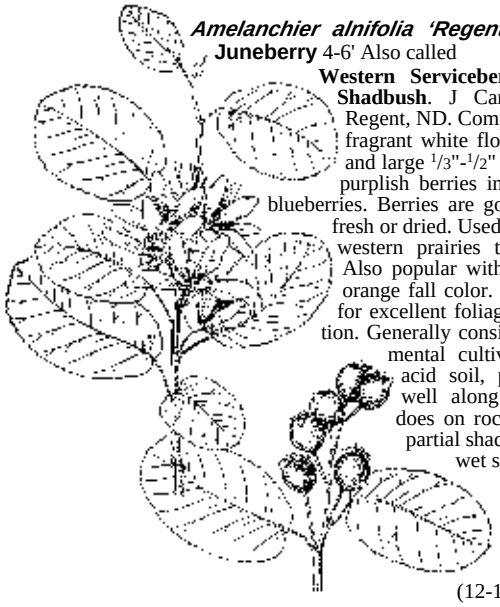
Remove mulch in early April. Protect flower buds from 28˚ frosts by covering with plastic during frosty nights.

Every two years partially cover the plants with a 1/2-1" layer of sand in spring before growth begins. This will help produce more berries and keep weeds down.

Fruiting Shrubs and Trees

These additional fruit-bearing trees and shrubs make beautiful hedges, attract birds and other wildlife, and many produce quite edible fruit as well. **Plant more than one of a kind to ensure pollination** for fruit production.

***Amelanchier alnifolia 'Regent'* Juneberry** 4-6' Also called **Western Serviceberry** or **Saskatoon Shadbush**. J Candrian introduction, Regent, ND. Compact shrub form with fragrant white flowers in early spring and large 1/3"-1/2" blueberry-like sweet purplish berries in July. Sweeter than blueberries. Berries are good in pies or jams, fresh or dried. Used by native peoples in western prairies to make pemmican. Also popular with wildlife. Nice red-orange fall color. Regent was selected for excellent foliage and berry production. Generally considered the best ornamental cultivar. Prefers slightly acid soil, pH 5-7. Thrives as well along stream beds as it does on rocky slopes. Tolerates partial shade, salt, pollution and wet spots but not standing water. May get leaf diseases in warmer humid areas. Native to northwestern North America. Z2. (12-18" transplants)



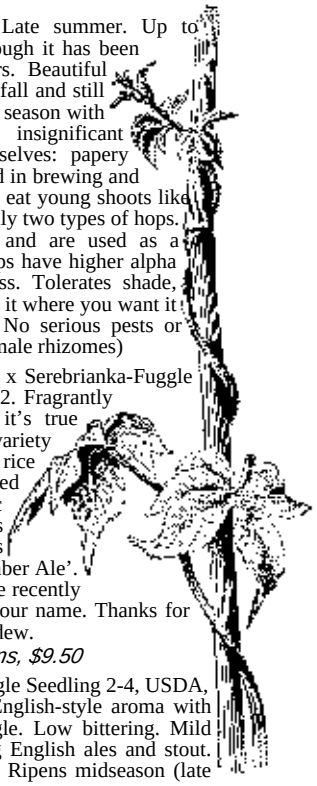
2570 Regent Juneberry, $11.00

***Cornus mas* Cornelian Cherry** 20-25' Large multistemmed shrub with oval to rounded form, or a small tree if you prune lower branches. Covered with small bright yellow flower clusters for 3 weeks in early spring, even before forsythia. Attractive long ovate leaves are shiny rich green. Bears profusions of dark red almost black 1/2-1" oblong cherry-like fruit from mid-late summer into fall; one tree can produce 30-70 lbs. a year. Fruit is variable but can be sweet, tart and tasty, and is traditionally used fresh, dried, pickled, in tarts, jellies, syrups and drinks. Best for fresh eating when dark red, soft and beginning to shrivel. Fruits have twice as much vitamin C as oranges; folkloric use for skin disorders, joint pains and stomach upset. Flaky, exfoliating greyish to orange-brown bark. Extremely tough wood suitable for shafts, spokes and even bolts. Easy to grow, pest- and fungus-free and very long lived. Excellent as a hedge or specimen. Prefers well-drained soils but adapts to most soils, city conditions, even shade. Drought tolerant. Resistant to deer browsing. Fruit buds tend to escape early spring frosts although they can be injured in colder areas. Pest problems negligible. Self-pollinating, though pollination may improve with more trees. Native to eastern Europe and western Asia. Z4/5. (18-30"transplants)

2640 Cornelian Cherry, $12.00

ME Grown = grown in Maine by a member of the Fedco growers coop

Humulus lupulus **Common Hop** Late summer. Up to 20-30' Not only for brewmeisters, although it has been used for brewing for over 1000 years. Beautiful twining vine dies back to the ground in fall and still covers a trellis or archway next growing season with green lobed leaves, bristly stems, insignificant greenish flowers, and the hops themselves: papery aromatic cone-like strobiles that are used in brewing and insomnia remedies. Europeans cook and eat young shoots like asparagus. For brewing, there are basically two types of hops. Aroma hops have lower alpha acids and are used as a finishing or conditioning hop. Bitter hops have higher alpha acids and are used to extract bitterness. Tolerates shade, adapted to most well-drained soils. Plant it where you want it because you may never get rid of it. No serious pests or diseases. Native to Eurasia. Z3. (5-6" female rhizomes)



Cascade Hops USDA 19124 (Fuggle x Serebrianka-Fuggle S) x open pollinated. Oregon St U, 1972. Fragrantly aromatic, low bittering value. "While it's true that Budweiser waves a frond of this variety over their vats of 'sparkling, fermented rice and corn beverage' Cascade has gained impeccable renown as *the* charismatic hop in such unsurpassable ales as Anchor's 'Liberty Ale', Sierra Nevada's 'Pale Ale' and McNeill's 'Firehouse Amber Ale'. Nothing 'light' about these." These came recently from a customer. Unfortunately I lost your name. Thanks for your comments! Resistant to downy mildew.

2670 Cascade Hops, 3 crowns, $9.50

Willamette Hops USDA 21003 x Fuggle Seedling 2-4, USDA, 1976. Excellent all-purpose hop. Old English-style aroma with brewing characteristics similar to Fuggle. Low bittering. Mild aroma. Good finishing hop for brewing English ales and stout. Vigorous. Higher yielding than Fuggle. Ripens midseason (late summer) and has good disease resistance.

2674 Willamette Hops, 3 crowns, $9.50

Hops

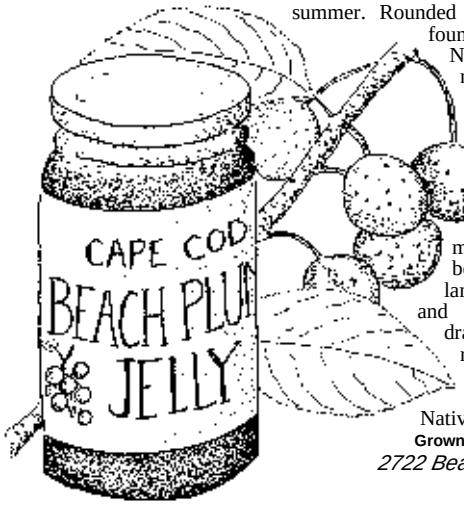
Refrigerate slightly moistened rhizomes in a plastic bag until planting. Hops prefer full sun and light-textured rich well-drained soil, with a pH of 6.5-8.0. As soon as soil can be worked in spring, till to create a weed-free area. Dig holes about one foot deep and at least three feet apart in rows. Add manure, compost and other slow-release organic fertilizers. Plant 2 rhizomes per hole, horizontally with the buds pointed up and cover with 1-2" of loose soil. The first year the hop plant requires frequent light watering and mulching.

Hops grow vertically, with lateral sidearms extending from the main vine and producing cones. Vines may grow up to 25' in a single season, and do best if they are trained onto strong twine 12-30' high, supported by a trellis, wire, pole, tree branch or south-facing building. When the young vines are about 1' long, select 2 or 3 most vigorous vines per hill and remove the rest. Gently wrap the vines clockwise onto a string. Once trained, the vine will guide itself.

Pick the hops when they are papery, but still slightly sticky, and filled with yellow powder. Harvest dates will vary with the variety and climate. Because most hops are produced out of reach from the ground, it is safest to lower the vines in order to pick the hops.

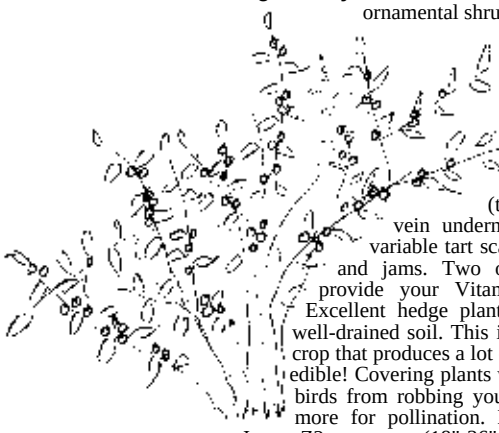
Cut the vines back to the ground after they have been killed by frost. Each spring apply a hearty dose of manure and compost as a top dressing. To help control hops' vigor, prune roots by cutting a 2-3' circle with a shovel around the base of the plant in spring.

Prunus maritima **Beach Plum** 6 x 5-6' Late summer. Rounded dense suckering shrub found along ocean beaches, New Brunswick to Carolinas. It's hard to miss the profusion of white flowers on Cape Cod in May of a good year. Purplish-red 1/2-1" fruit in late summer. Excellent jams, sauces, jellies. If you're a meat eater, nothing beats beach plum jelly with lamb. Does well in poor and sandy or heavy well-drained soils. Productive, reliable, salt tolerant. Plant about 6' apart, at least 2 for pollination. Native to eastern U.S. Z3. **ME Grown.** (12"-30" transplants)



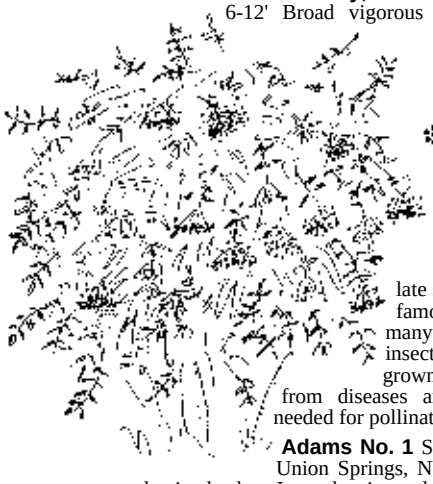
2722 Beach Plum, $8.50

P. tomentosa **Nanking Cherry** 6-10' x same. Broad dense highly ornamental shrub, becoming open and attractively irregular. Pink buds open to masses of fragrant white 3/4" flowers. Deeply veined light green foliage with very fine fuzz (tomentosa) lining each vein underneath. Very tasty but variable tart scarlet 1/2" fruit for pies and jams. Two or three berries will provide your Vitamin C for the day. Excellent hedge plant; prefers full sun in well-drained soil. This is an edible landscape crop that produces a lot of fruit that actually *is* edible! Covering plants with netting will deter birds from robbing your crop. Plant two or more for pollination. Native to China and Japan. Z2. **ME Grown.** (18"-36" transplants)



2725 Nanking Cherry, $9.00

Sambucus canadensis **Elderberry, Sweet** or **Black-Berried Elder** 6-12' Broad vigorous multistemmed shrub with spreading branches and unkempt habit. Large flat creamy-white flower clusters (cymes) in early summer cover the shrub, make delicious fritters or a tea for colds and flu. Purple-black berries in late summer used in jelly or pie, famous for wine and attract many species of birds, beneficial insects, and other wildlife. Best grown in moist rich soil. Free from diseases and insects. Two varieties needed for pollination. Native to eastern U.S.



Adams No. 1 Selected by William Adams, Union Springs, NY, 1926. Very large vigorous strong productive bushes. Large berries and fruit clusters. Z4. **ME Grown.** (16-24" transplants)

2760 Adams #1 Elderberry, $9.00

York Adams No. 2 x Ezyoff. NY Stn, 1964. Considered the largest-fruited and heaviest-bearing cultivar. Heavy clusters ripen after Adams. Bright green foliage on a large rounded shrub. Z3. **ME Grown.** (16-24" transplants)

2780 York Elderberry, $9.00

Viburnum trilobum **Highbush Cranberry** 8-12' Also known as **Crampbark**. Multistemmed shrub, good for screens and hedges, has clusters of white flowers in May. Pendulous clusters of brilliant red-orange berries hang September-February and are still edible off the bush in midwinter. Berries make jams and preserves, also are popular with dozens of bird species, especially waxwings. Flowers help attract and support beneficial insects. Bark used as anti-spasmodic; tea especially good for relieving moontime cramping. Maple-like leaves tinged red in the spring. Tolerates dry soils if high in organic matter, but prefers rich moist well-drained soils, sun or shade. Soil pH 6-7. Pollution tolerant. Susceptible to viburnum leaf beetle; check with your local extension office or nursery to determine if this could be a problem. Not a bog cranberry (see #**2496**). Native from Canada to NY. Self-pollinating. Z2.

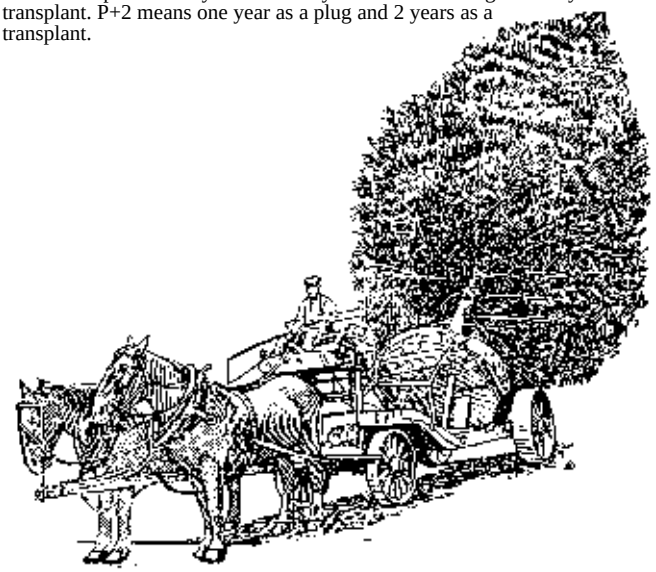
Phillips Selected by Elwin Meader from plants found in W Acton, ME. Berries do not emit offensive musky odor when heated. Red-veined red-tinged leaves. Jells without additional pectin. If you're hoping to eat the fruit, Phillips is superior in flavor. **ME Grown.** (14-24" transplants)

2880 Phillips Highbush Cranberry, $12.00

Wentworth Original plants selected for edibility and large fruit size in the early l900s from a collection of 3000 viburnums. Bright lime-green leaves. Red fall foliage. **ME Grown.** (6-12" beefy plants)

2885 Wentworth Highbush Cranberry, $8.00

Conifers transplanted once in the nursery have a much higher success rate. These conifers are mostly three- to four-year-old transplants. 2-2TR means the plant is 4 years old: 2 years as a seedling and 2 years as a transplant. P+2 means one year as a plug and 2 years as a transplant.



***Abies balsamea* Balsam Fir** 45-75' Often considered the "only real Christmas tree." Fragrant needles, a favorite for wreaths, pillows and potpourri. Small blisters (which are fun to "pop" at other people) on younger trees contain a transparent aromatic resin that native peoples used as an inhalant for headaches and congestion, and as a poultice for burns, cuts and arthritis. Narrow, conical, smooth-barked. Prefers well-drained moist acid soils. Avoid polluted areas. Semi-shade tolerant, slow-growing. Good specimen tree and songbird nesting area, and a favorite browse of moose and deer. The most abundant conifer in Maine, "country of the pointed firs." Native Labrador to PA. Z3. (3-2TR, 8-15")

2910 Balsam Fir, bundle of 5, $13.00

Conifers tolerate a wide range of soil conditions, but prefer a pH between 5.5-6.5. If you are planting in dry or well-drained areas, dip tree roots in Agri-gel (see page 30) solution before planting to protect roots from drying out. Do not use Agri-gel in heavy clay soils or wet areas. Do not soak conifers overnight; a good dipping is sufficient.

Before planting, prune off 1/3 of the roots. Dig a small hole or make an incision with a spade or planting bar and slip the tree in to the level it grew in the nursery. Fan the roots out; do not wind them around in the hole. It is much better to prune the roots than to crowd them in the hole. Water well and pack the earth down with your feet to remove air pockets. Young conifers need 3/4-1" of rain per week. Periodic deep waterings are far more beneficial than frequent sprinklings. No fertilization is necessary in the first year. In later years you may fertilize around the drip line.

To make evergreens dense and compact, remove leader and center bud on the end of each side branch.

***Metasequoia glyptostroboides* Dawn Redwood** 100' One of the most spectacular of all the ornamental trees. The wide irregular trunk looks like something out of a fairy tale with its iridescent golden-orange bark that becomes deeply grooved, hollowed and fluted with age. The bright green deciduous needles turn orange in the fall. Grows quickly, up to 50' in 15-20 years, with many small-diameter horizontal branches and a uniform conical habit. Highly adaptable, easy to transplant. Prefers moist deep well-drained slightly acid soil in full sun. Will tolerate wet or dry sites. Pollution resistant; good specimen or street tree, rarely needs pruning. Fossils dating back 50 million years have been found in Japan. Thought to be extinct until it was rediscovered in central China in 1941. Resembles California redwoods only vaguely. Native of China and Japan. Z4. **ME Grown.** (24-30" transplants)

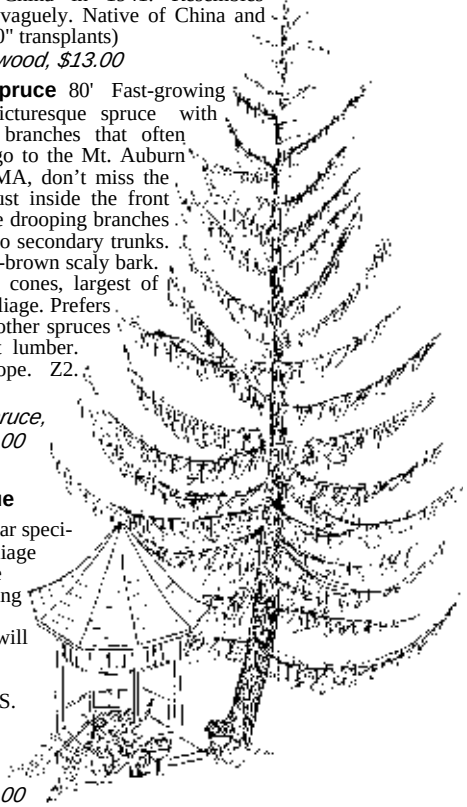
3000 Dawn Redwood, $13.00

***Picea abies* Norway Spruce** 80' Fast-growing wide-spreading upright picturesque spruce with graceful long pendulous branches that often reach the ground. If you go to the Mt. Auburn Cemetery in Cambridge, MA, don't miss the ancient Norway Spruce just inside the front gate. Several of its massive drooping branches have themselves turned into secondary trunks. It is truly amazing. Orange-brown scaly bark. Showy (marketable!) 4-6" cones, largest of the spruce. Bright green foliage. Prefers loam but does better than other spruces on poorer soils. Excellent lumber. Native to northern Europe. Z2. (P+2, 9-18")

3040 Norway Spruce, bundle of 5, $13.00

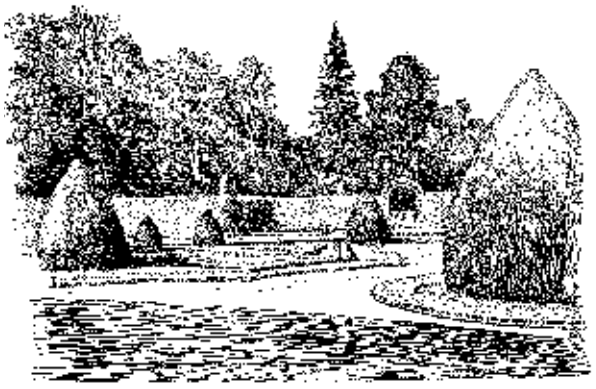
***P. pungens glauca* 'Majestic' Colorado Blue Spruce** 30-60' Very popular specimen tree with truer blue foliage than other cultivars. Can be used as a screen; fast growing after 3'. Does not like wet soil. Extra spring nitrogen will improve blue color, which doesn't appear for first few years. Native to western U.S. Z2. (2-2 TR, 6-12")

3060 Colorado Blue Spruce, bundle of 5, $13.00



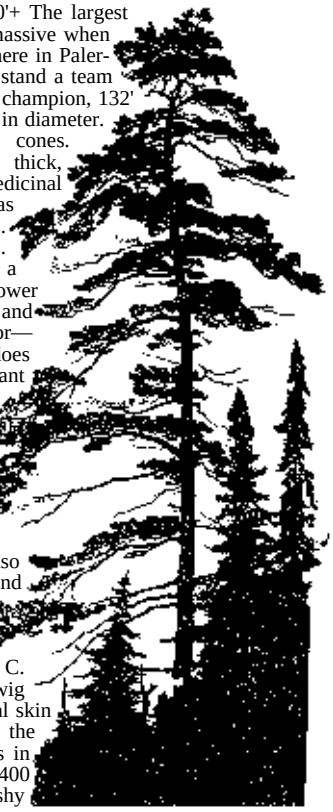
***Pinus resinosa* Red Pine** 50-80' Also known as **Norway Pine**. Probably called *Norway* Pine because the first specimens taken to England and planted in Kew Gardens were from Norway, Maine. Others speculate that Europeans first encountered this native tree in what became Norway, Maine. Perhaps both are true. Broad irregular or rounded crown of spreading branches. Long soft 3-8" needles. 1 1/2-2 1/2" egg-shaped cones. Distinctive pinkish-silver scaly plated bark. Fast growing; thrives in poor soil, even sand. Some of the most beautiful specimens in central Maine are growing in a mixture of sand and gravel with apparently no organic matter at all. Relatively disease-free. Nearly became extinct during the last ice age, but is making a comeback. You can help! Native to northeastern U.S. and Canada. Z3. (P+2, 6-12")

3170 Red Pine, bundle of 5, $13.00



For a formal effect, use hedge shears and prune plants to desired shape.

P. strobus **Eastern White Pine** 100'+ The largest northeastern conifer. Magnificent and massive when mature. 200 years ago the white pines here in Palermo were typically 200' tall. You could stand a team of oxen on a stump! The current Maine champion, 132' tall, grows in Morrill and measures 6'9" in diameter. 2-5" blue-green needles and 3-10" cones. Smooth greyish-green bark becomes thick, rough and deeply furrowed with age. Medicinal teas are made from needles. The resin has numerous practical and medicinal uses. Excellent wood with a thousand uses. Planted thick and sheared, it makes a beautiful hedge which will not drop its lower branches with maturity. Grows fast and transplants well. Likes ordinary to poor—even sandy—soil. Shade tolerant, but does not like salt or roadsides. Do not plant within 300' of currants or gooseberries. Maine's state tree and Fedco Trees' logo. Native to eastern U.S. (2-2TR 9-18")

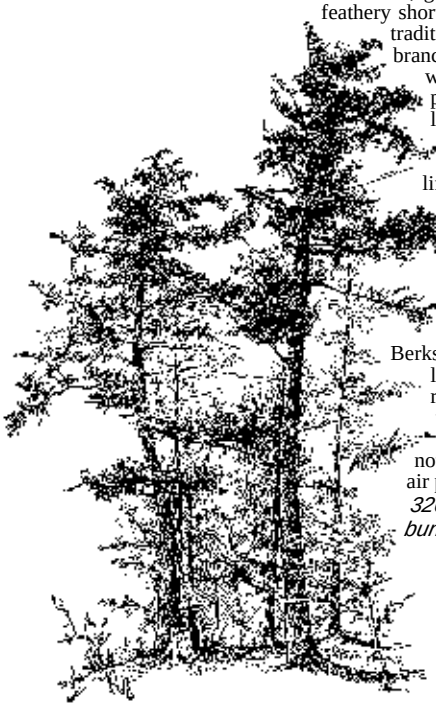


3180 Eastern White Pine, bundle of 5, $13.00

Thuja occidentalis **Arborvitae** 20-60' Arborvitae means tree of life. Also called **Eastern White Cedar**. Narrow and tall with twiggy branches, soft orange-brown bark, and flat foliage unlike that of any other conifer. Foliage and bark tea high in vitamin C. Foliage tea helpful in infections, twig decoction makes an anti-viral anti-fungal skin wash. Valuable light fragrant wood, the standard for fence posts and log cabins in Maine. Slow-growing, lives up to 400 years. Thrives in rich moist marshy neutral-to-alkaline soils. Good for screens and hedges. Probably the first North American tree brought to Europe. Next time you're on Mount Desert, check out Thuja Gardens: beautiful cedars surrounding even more beautiful flower gardens. While you're there, visit Asticou Azalea Gardens, just down the road. Z2. (P+2, 6-12")

3230 American Arborvitae, bundle of 5, $13.00

Tsuga canadensis **Eastern Hemlock** 40-70' Also called **Canadian Hemlock**. One of the most beautiful conifers; graceful pyramid shape and feathery short needles. The leaves were traditionally used in teas, the branches in brooms. Groves were held sacred by native peoples. Today, hemlock lumber is a common construction wood. Valuable for bird forage and wildlife cover. Makes an excellent hedge when planted 3-4' apart. Be sure to notice the magnificent hemlock hedge surrounding the grounds if you ever visit the Tanglewood Music Center in the Berkshires. Prefers moist cool locations, but will tolerate rocky sandy acid conditions; can thrive even in considerable shade. Does not tolerate drought, salt or air pollution. Z3. (P+2, 6-12")



3260 Eastern Hemlock, bundle of 5, $13.00

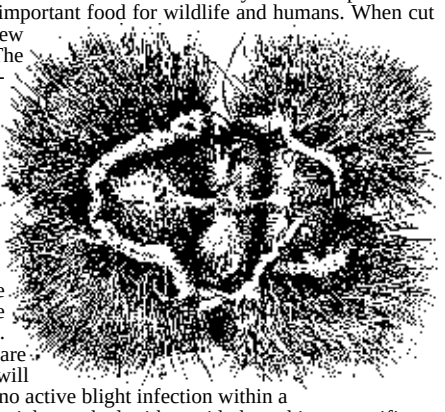
Agri-gel A hydrogel formulation which absorbs and holds water. The swollen crystals adhere to plant roots, reducing transplant shock. Safe, non-toxic, easy to use. Useful for garden seedlings as well as woody plants. Highly recommended for raspberries and conifers. Half-ounce packet mixed with one to three gallons of water will treat up to 100 cane plants, or 50 trees and shrubs. 1/2 oz.

7510 Agri-gel, $2.00

Nut Trees

Other than hazelnuts, nut trees should be planted 50' apart for nut production, 20' apart for lumber. **At least two trees of each species are required for pollination**.

Castanea dentata **American Chestnut** Up to 100' Once again we're offering seedlings of pure American Chestnuts, from seeds collected in Maine by the Maine chapter of the American Chestnut Foundation. Before 1900, American Chestnut was the predominant and most important deciduous tree in the eastern U.S. The arrow-straight rot-resistant wood was used for everything from mine timbers to musical instruments. Heavy annual crops of delicious sweet nuts were an important food for wildlife and humans. When cut down, the trees quickly grew back from the stump. The Asian fungus *Cryphonetria parasitica* (chestnut blight, formerly named *Endothia parasitica*) was discovered in Brooklyn in 1904, and within 50 years it had killed virtually every chestnut tree in the eastern U.S. The blight does not kill the roots however, and rare isolated stands of mature trees can still be found. The trees we're offering are blight-susceptible, but will probably thrive if there is no active blight infection within a mile. Fast-growing and straight-trunked with a wide-branching magnificent rounded crown. Ribbed sharp-toothed dark lustrous green foliage. Yellow fall color. Fragrant white blooms in July. Prefers well-drained acid soil. Two or more needed for pollination, but will cross-pollinate with Asian and European chestnuts. Precocious, bearing heavy crops of nuts in 10 years. From each American Chestnut purchase, Fedco will donate $4 to support the work of the American Chestnut Foundation. Z4. **ME Grown.** (3-5' plants)



3400 American Chestnut, $16.50

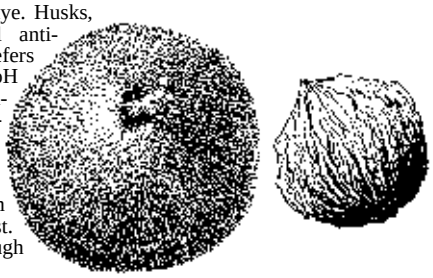
C. mollissima **Chinese Chestnut** 40-60' x same. Low-branching broadly rounded open form with large long narrow sharp-toothed shiny green leaves. It's a tree-climber's tree. Humorous catkins look like green fireworks sprouting from the branch tips. Decent-tasting prickly burr-encased edible nuts as early as 4 or 5 years after planting. Of the same genus as the beloved American Chestnut (*C. dentata*, above), but a quite different tree. Immune or at least highly resistant to the dreaded chestnut blight and used in breeding work to develop a blight-immune American Chestnut. Yellow fall color. Grooved grey bark. Prefers acid well-drained loamy soils. Native to eastern Asia. Z4. **ME Grown.** (3-4' plants)

3405 Chinese Chestnut, $10.00

Corylus americana **x** ***C. avellana*** **Ozmun #2 Hazelbert** 10-15' x same. A large dense vase-shaped shrub or small tree which can be expected to produce large crops of high quality nearly round nuts with very good flavor on a two- or three-year cycle. Fruiting should begin 3-4 years after planting. A composite hybrid of five selected individuals, Ozmun #2 originally came to us from Oikos Nursery in Michigan. Quite attractive large 4" round serrated foliage. Sun to light shade. Shallow rooted. Prefers sandy loam. Plant close (3-4') for a dense hedge, or farther apart (10-20') for a nut "orchard". Two or more necessary for pollination. Nuts and catkins are a wildlife favorite. I always know when the birds have been feasting on my catkins; they leave their signature on the back porch. Resistant to filbert blight. Z4. **ME Grown.** (2 1/2-4')

3427 Ozmun #2 Hazelbert, $12.00

Juglans nigra **Black Walnut** 70-90' Magnificent open rounded crown of massive limbs with dark green leaves. Highly valued cabinet and veneer wood. Thick-shelled edible nuts have an intense distinctive flavor. Their husks yield a rich brown dye. Husks, leaves and roots are all antifungal. Deep taproot. Prefers moist, well-drained soils, pH 6-7. Roots give off a compound, juglone, which inhibits competing plants, so don't plant one too close to your garden. Anne Hallee grew this year's crop from seeds collected in Belfast. Native to eastern U.S. though not quite into Maine. Z4. **ME Grown.** (3-4' plants)



3455 Black Walnut, $10.00

Shade Trees

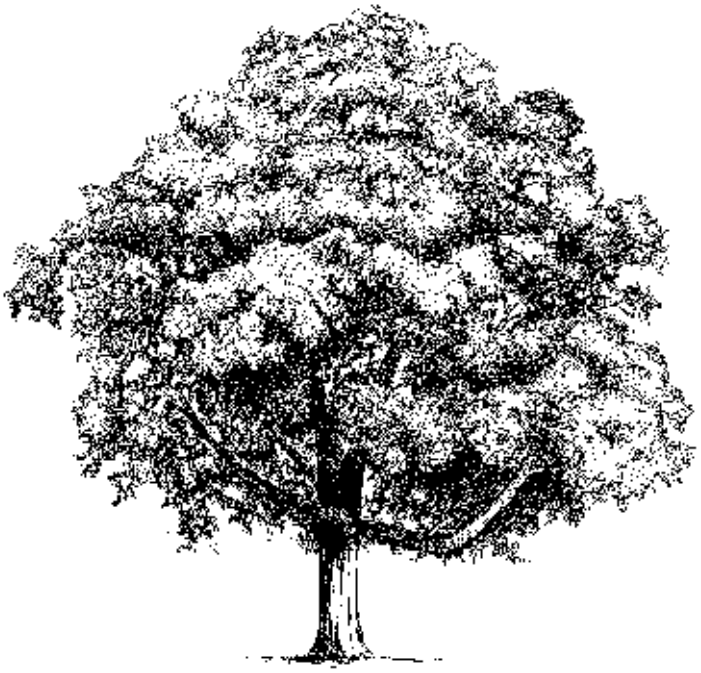
One hot July afternoon I got a ride through Waterville from the Toyota shop back to the office. Not having to focus on the road I let my eyes wander. Even in a rather modest town such as Waterville—or perhaps especially in such a town—the shade trees make the place. They embrace the old two-story clapboarded duplexes in their arms. They lean over the shingled rooftops like new moms over afternoon cradles.

Once I saw a computer simulation of a downtown area with all the power-lines removed. What a difference it made. It would be interesting to see the same for Waterville. We could do two. In one, we could add trees to Elm Street, where they've been gone for years. Does that stretch look bleak now. In the other, we could remove all the trees from Pleasant Street. I think everyone would get the picture.

A shade tree can make a difference. Each year we offer some of our favorites. Their many attributes are well known. And there are many other trees throughout the catalog that provide shade. They include all the apples (#**0034**ff), Stacyville pear (#**1240**), all the conifers (#**2910**ff), American and Chinese Chestnuts and Black Walnut (#**3400**ff), Donald Wyman, Red Jade and Redfield crabapples (#**4051**ff), and the Japanese Tree Lilac (#**4212**).

Acer rubrum **Red Maple** 50-60' Also known as **Swamp Maple**. While the Sugar Maple often has a bushier shape, the Red Maple usually has a central leader and a more upright growth habit. In early spring the dark red flowers cover the driveway long before any leaves appear. In the fall the foliage turns electric orange, yellow, brilliant red or maybe all three on one tree. The astounding combinations of colors surround me as I head off in my truck to go apple exploring every October. Excellent in the yard. Does not have the weak branching problems of Silver Maple. Sometimes tapped for sap in spring. Transplants easily. Prefers moist acid conditions but is adaptable to dry locations. Note that this is *not* the red-leaf maple *A. platanoides* 'Crimson King'. Native to eastern North America. Z3. (4-5' plants)

3625 Red Maple, $18.00



A. saccharum **Sugar Maple** 50-100' Largest of our native maples, also known as **Rock Maple**, valued for shade, syrup, and lumber. Famous for its yellow gold scarlet and crimson fall foliage. Light grey bark. Fresh sap a spring treat. Very hardy. Shade tolerant, making it easy to interplant in existing woods. Prefers moist, well-drained soils. Huge upright spreading form. Traditionally a pair of Sugar Maples was often planted out in front of a farmhouse on the inhabitants' wedding day. Those "wedding trees" still grace many Maine front yards after all these years. Susceptible to salt and air pollution; not a good city tree. Native Quebec to Gulf Coast. Z3. (2-2TR 5-6" plants)

3630 Sugar Maple, $18.00

Betula papyrifera **Paper Birch, Canoe Birch** or **White Birch** 30-70' x 30' Medium-sized tree with an irregular oval shape, upright angled branches and magnificent chalk-white peeling bark. Deep green foliage produces light shade in summer and turns clear yellow in fall. Birds prize the catkins, buds and seeds. Twigs are a favorite deer browse. Bark traditionally used for canoes, containers and roofing. Wood quite valuable at the sawmill. Sap makes an excellent "maple" syrup. Branches, stuck into the ground, make great pea fencing. Prefers moist well-drained acid soil though ours thrive on ledge. At its best in Zone 4 or colder, but grows well as far south as Pennsylvania, about Zone 6. Native to northern North America. (clump of 3, 3-4')

3655 Paper Birch Clump, $28.00

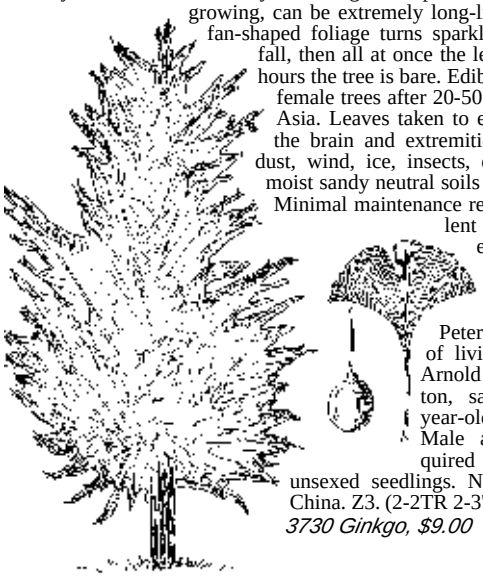
Catalpa speciosa **Northern Catalpa** 40-60' Also known as **Western Catalpa**, **Elephant Ear Tree**, **Catawba** and **Cigar Tree**.If you can't afford orchids for that special someone, plant a Catalpa and you'll be swimming in orchid-like flowers early every summer. With its form, its foliage and its flowers, this tree looks great on the street and great in the yard. Fast-growing coarse habit with a somewhat narrow open irregular crown and thick interesting undulant branches. Dense foliage of huge "elephant ear" heart-shaped leaves provides excellent shade. Covered in early summer with clusters of orchid-like ruffled incredibly fragrant jasmine-scented white blossoms each dotted with purple and spotted with rich buttery yellow radiating from the throat. Fruits are long bean-like "cigar" pods. Prefers deep moist fertile soil, but thrives in almost any conditions and soils, sun or partial shade. Grows rapidly. Remains dormant late into spring. Native to central U.S. Z4. (3-4' plants)

3670 Northern Catalpa, $12.00

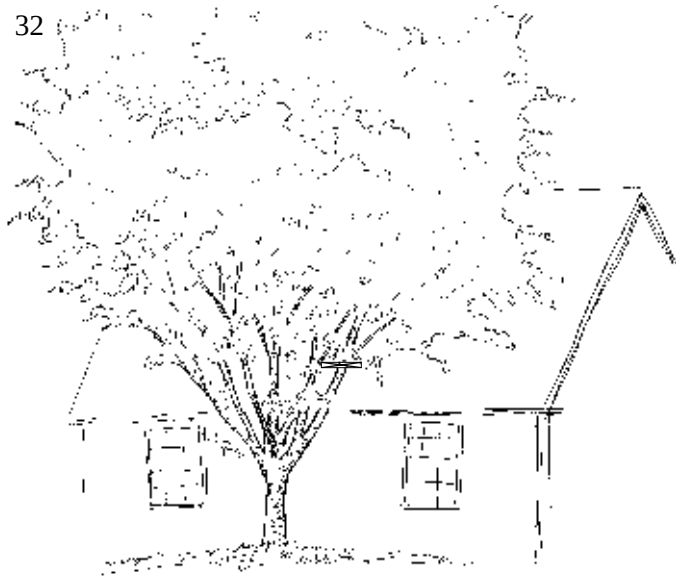
Fraxinus nigra **Brown Ash** or **Black Ash** 40-50' Tall slender tree with a short narrow crown prefers rich moist ground, wet swamplands and stream banks. The bark is corky, spongy, chalky, and rubs off in your hands. Seems to be disappearing, although once common in the Northeast. There are still quite a few growing in my woods scattered along the small streams that feed Turner Pond. Called Black Ash elsewhere, in Maine known always as Brown Ash. Preferred by basketmakers because it easily splits into strips. Once commonly used for barrel hoops, it also makes a rich brown cabinet wood. Partial shade. pH adaptable. Native to eastern U.S. and Canada. Z2. (2-2TR 3-4' plants)

3720 Brown Ash, $12.00

Ginkgo biloba **Ginkgo** 50-80' Also called **Maidenhair Tree**. Considered the oldest living genus of seed plants; grew in North America in the time of the dinosaurs. Upright when young with branches that spike out and up like the rays of the sun, eventually becoming wide-spreading and graceful. Slow-growing, can be extremely long-lived. Unique fine-cut fan-shaped foliage turns sparkling golden-yellow in fall, then all at once the leaves drop and within hours the tree is bare. Edible seeds, produced on female trees after 20-50 years, widely used in Asia. Leaves taken to enhance circulation to the brain and extremities. Tolerates smoke, dust, wind, ice, insects, disease, salt. Prefers moist sandy neutral soils but is very adaptable. Minimal maintenance requirements, an excellent city tree. Has anyone ever counted how many there are in Manhattan? There must be thousands. Peter Del Tredici, director of living collections at the Arnold Arboretum in Boston, says there are 3000-year-old specimens in China. Male and female tree required for fruit. These are unsexed seedlings. Native to southeastern China. Z3. (2-2TR 2-3' plants)



3730 Ginkgo, $9.00

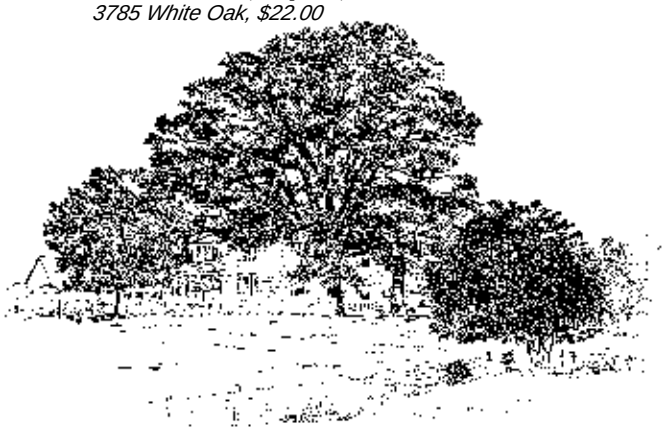


Prunus maackii **Amur Chokecherry** 20-40' x same. Extremely hardy medium-sized spreading rounded tree with year-round interest. White flowers in 2-3" long racemes in mid-spring. Spectacular dazzling bark makes the whole tree sparkle, varying in color from golden brown to dark red with glistening metallic flakes that exfoliate like birch when the tree is young. The color reminds me of an enormous golden Chinese buddha. Rich deep olive-green ovate foliage Red-black 1/4" berries in midsummer, relished by birds and also suitable for jelly, juice and wine. Prefers well-drained soil. Native to the Amur region of eastern Russia. Z2. **ME Grown.** (3-5' plants)

3775 Amur Chokecherry, $13.00

Quercus alba **White Oak** 60-80' x same. Spectacular broad irregularly rounded oak dominates the landscape and has accumulated centuries of folklore. The lowest branches sometimes stretch out horizontally as far as 50' from the trunk. One of the most beautiful specimens I know is in Bedford, NY. "The Bedford Oak. Dates back to the 15th century" is carved into a rock near the tree. Stop and see it if you can; it's just a few miles off 684. There are some extremely fine specimens in Maine, too, on Swan Island in the Kennebec River right off Richmond. Peeling light grey papery bark is distinctive on mature trees. Bark tea makes an effective astringent. Wood is valued for lumber and firewood. Edible acorns attract a diversity of wildlife. Once common along the Maine coast, it was almost entirely stripped for boat-building lumber over a century ago. Soil adaptable though it prefers deep moist well-drained acid conditions. Thrives in locations with minimal soil compaction where leaves can be left at base. Disease- and insect-resistant, drought tolerant. Slow growing. Extremely long-lived. Native to eastern U.S. Z3. (3-4' plants)

3785 White Oak, $22.00

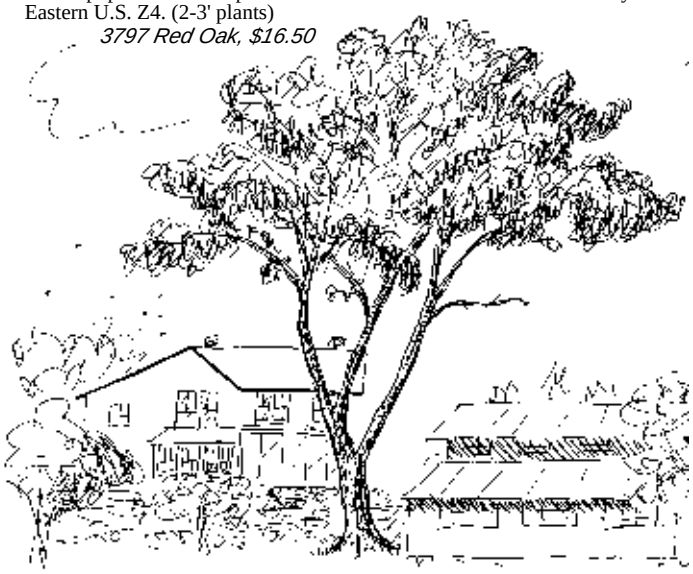


Q. bicolor **Swamp White Oak** or **Bicolor Oak** 50-60' x same. A massive rounded shade tree with a short deeply ridged trunk and a fan of branches, those uppermost ascending and those lower, drooping. The contrast between the light grey bark and the dark trunk fissures is particularly striking. Called Swamp White in recognition of its affinity to the wild low wetlands that once peppered eastern North America before the days of the parking lot and the big box. Called Bicolor because its large thick leathery lobed leaves have a glossy dark green upper surface and a white to greyish-green hairy felty underside. Its large 1 1/2" sweet acorns are highly attractive to wildlife, particularly water fowl, sapsuckers and (ugh) squirrels. Its yellow to reddish-purple fall foliage persists until spring. Prefers moist, acid soils where drainage is poor, but exhibits excellent drought resistance as well. Very fast growing once established. Native northeastern U.S. Z3. (2-3' plants)

3788 Swamp White Oak, $16.50

Q. rubra **Red Oak** 60-80' Also called **Northern Red Oak**. The most common oak in northern New England and a common tree in central Maine. Typically a single large trunk dividing into several large ascending spreading branches. While the branches are not as massive as some of the other oaks, its open rounded crown is magnificently impressive. The trunk itself is a deep grey textured web of surfaces overlaid upon one another. Fast growing, up to two feet per year. Prefers well-drained sandy, slightly acid soils. Those on my farm thrive in the shallow ledgey ground. Will tolerate shade, compacted soil, salt, pollution and other urban conditions. Sharply toothed foliage turns orange-tan during apple season. The 1" acorns feed the native population and sprout with ease more or less wherever they land. Eastern U.S. Z4. (2-3' plants)

3797 Red Oak, $16.50



Salix **spp. 'Cape Rosier' Basket Willow** 50' more or less. If you're looking to make a basket, a bowl or maybe a boat this could be the only material you need. Beautiful subtly golden-colored basket willow propagated from the Old Nearing Homestead on Cape Rosier, ME. The trees have been pollarded for many years, a European pruning technique that enhances the formation of long whips for basket-making, enables easy annual spring harvesting and controls the size of the tree. In time, the trees develop a gnarly head which has great character. Stanley Joseph, homesteader on Cape Rosier and neighbor of the Nearings, used this willow for many years to make everything from baskets to boats (the Irish coracle). It was with Stanley's encouragement many years ago that I first planted basket willows at home in Palermo. Prefers sun and moist soils. Z4. **ME Grown.** (3-6' plants)

3832 Cape Rosier Willow, $12.00

S. alba **'Tristis' Niobe Weeping Willow** 50x50' The classic weeping willow, a very large majestic and extremely graceful wide-spreading tree. Golden drooping branches can hang to the ground. Branches used for basket weaving; golden bark and leaves used medicinally. Not to be confused with the Whomping Willow of Hogwarts fame—branches sway freely in the breeze but are unlikely to attack, though roots have been known to disrupt plumbing. Easily transplanted and fast growing. Prefers sun and moist soils. Native to southern Europe and western Asia. Z4. **ME Grown.** (2-5' plants)

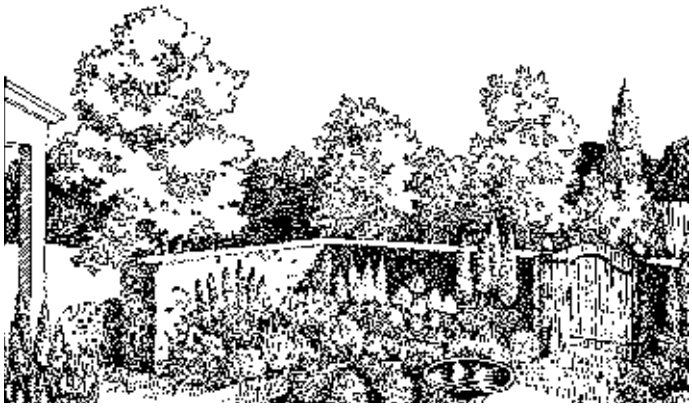
3833 Niobe Weeping Willow, $9.00

S. matsudana **'Snake' Snake WIllow** 30-50'. A fast-growing wide oval tree with distinctively curled wiggled and twisted branches. The twigs look like sine waves—or maybe the stock market. Even the foliage loops and curls. Snake is a selection of the standard contorted 'Tortuosa' willow with an even more wild branching habit. Interesting outside in the yard and beautiful in a wreath or a vase. Quite nice as a young specimen. Keep it pruned and keep it small if you like. Drought tolerant, although like the other willows, it'll thrive in a moist location. Native to Argentina. Generally considered a Zone 5 plant, although you might find it does well in Zone 4. **ME Grown.** (3-4' plants)

3843 Snake Willow, $10.00

Tilia americana **American Linden** 60-80' Also known as **Basswood**. Tall stately tree with rounded crown and numerous low-hung spreading branches. Good tree for attracting bees no matter how remote the location. Sweetly fragrant yellow June flowers reputed to make the best honey, also a popular after-dinner tea and stomach remedy. I consider it the best soft carving wood. Inner bark, tough and fibrous, for ropes and nets. Young fruit and flowers ground into a paste as a chocolate substitute. Yellow fall color. Likes deep rich moist soils, but will grow in dry heavier soils. Full sun or partial shade. Sensitive to salt and pollution. Tolerates alkaline soil. Subject to Japanese beetles and other insect damage, though control measures are seldom needed. May live to 900 years. Native New Brunswick to Virginia. Z3. (3-4' plants)

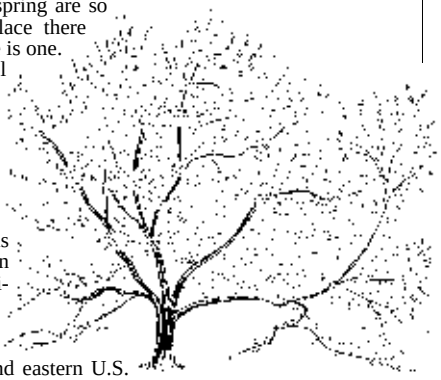
3850 American Linden, $13.00



Ornamental Trees

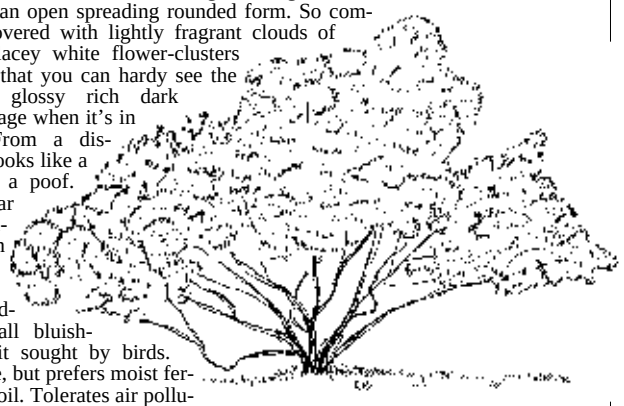
Although some of these smaller trees are certainly large enough to provide shade and others may provide excellent wildlife food and cover, their chief attribute tends to be their beauty. Some have spectacular blooms while others have amazing foliage, fragrance, bark, branch structure or overall appearance. All deserve to be planted more often than they are.

Cercis canadensis **Redbud** 25-30' Small irregularly vase-shaped tree is one of the most wonderfully ornamental. Clusters of small brilliant purplish-pink pea-like flowers in early spring are so abundant it seems that any place there could possibly be a flower there is one. They even dot the graceful branches themselves and come right out of the trunk. It's an astonishing sight. Very large, up to 7", heart-shaped leaves emerge a beautiful opaque pink, gradually mature to deep green and give bright yellow fall color. 2-3" flat leguminous pods. Excellent honey plant. Sun or partial shade. Fine as a specimen tree or in groups. Needs sweating before planting to break dormancy, instructions on page 5. Native to central and eastern U.S. Z4. (2-3' plants)



3907 Redbud, $18.00

Chionanthus virginicus **White Fringetree** 15-30' x 30' Michael Dirr, in his definitive *Manual of Woody Landscape Plants*, suggests that fringetree should be our national shrub. I agree. Large multistemmed shrub or small tree with an open spreading rounded form. So completely covered with lightly fragrant clouds of feathery lacey white flower-clusters in spring that you can hardy see the beautiful glossy rich dark green foliage when it's in bloom. From a distance, it looks like a tree with a poof. Spectacular as a specimen, in groups, borders, near buildings. Small bluish-black fruit sought by birds. Adaptable, but prefers moist fertile acid soil. Tolerates air pollution; does well in cities. Native of eastern U.S. Z3. (2-2TR 18-24" plants)



3910 Fringetree, $14.00

Cornus alternifolia **Pagoda Dogwood** 20' x 30-35' Also known as **Alternate-Leaved Dogwood**. Small tree or large multistemmed shrub, particularly beautiful for its tiers of horizontal branches and their distinct sympodial (consecutive "Y's") branching habit right down to the smallest twigs. Extremely fragrant white 2-3" flower clusters in mid-late spring, followed by immature olive-green berries, each tipped with a tiny bright yellow style remnant. In midsummer clusters of dark blue berries ripen above the blue-green foliage. One of the most popular dogwoods with the birds. Prefers partial shade and moist well-drained acid soil, but tolerates full sun, poor soil and even clay. pH adaptable. Excellent naturalized as a specimen or in groups and often found growing with sugar maple, beech and basswood. Reddish-purple fall color. Native to eastern U.S. Z3. **ME Grown.** (1-2' plants)

3920 Pagoda Dogwood, $10.00

C. kousa **Kousa Dogwood** 20-30' x same. Small rounded horizontal spreading adaptable specimen tree. Covered with layers of milky-white blossoms for up to six weeks in early summer. The pointed bracts give blossoms a star-like appearance and the overall effect is like frosting on a 20-foot green layer cake. The deep pink edible ping pong ball-sized fruit resemble raspberries in appearance, variously described as bland, exotic, paw paw-like and mealy. Some people love it. Tan, grey and orange exfoliating bark. Scarlet-orange-yellow fall color. Resistant to dogwood anthracnose and borer. Prefers light well-drained soils with an abundance of air and sun, but it'll take sun or shade, wet or dry. Peter Del Tredici, of the Arnold Arboretum wrote, "It's hard to imagine a more durable or useful tree." 2002 Cary Award winner for Distinctive Plants for New England. Native of China and Japan. Probably hardier than usually rated. Z4-5. (2-3' plants)

3925 Kousa Dogwood, $16.50

Halesia carolina var. monticola **'Wedding Bells' Silverbell** or **Mountain Silverbell** 20x15' Mark Brand introduction, University of Connecticut. Although generally considered a Zone 5 tree, the old Silverbell in a friend's Gardiner yard has thrived in central Maine for the past 100 years. From across the lawn in May, with its display of small delicate semi-translucent white bell-shaped flowers, the tree appears to be covered with shimmering ice crystals: it's ethereal. 'Wedding Bells' is a recent selection from Ohio with larger blossoms. In my yard it showed no die-back after last winter. Dark yellow-green foliage turns clear golden-yellow in the fall. A small to medium-sized tree with a rounded form, suitable as a border or understory plant. Prefers rich acid well-drained soil. Sun or partial shade. Pest free. Native to mid-Atlantic and southeastern U.S. Z4. **ME Grown.** (3-5' plants)

3968 Wedding Bells Silverbell, $13.00

Hamamelis virginiana **Witch Hazel** 20-30' A small tree or large shrub of irregular rounded form and interesting crooked branches. Yellow 1/2" flowers with a unique fresh fragrance appear in the fall as the oval leaves turn brilliant golden-yellow. Witch hazel extract, from leaves, young bark and roots, has astringent and antiseptic uses. Said to be the preferred wood of dowsers. Full sun or shade. Prefers moist acid soils; avoid dry spots. No pests or diseases, does well with very little care. Native Canada to Georgia. Z3. **ME Grown.** (1-2' plants)

3970 Witch Hazel, $9.00

4010-4174 ***Malus*** **Crabapples** on pages 34-35.

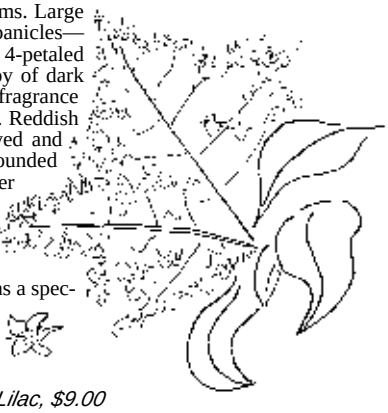
Salix discolor **'Rosea' Pink Pussy Willow** 20-25'? Highly attractive small tree or shrub. This plant is new to us and we're not certain of its potential size. We do know it's quite vigorous and will grow to about 5 feet square in 3 years. Dark green foliage with a wonderful soft silver velvety underside reminiscent of kitten fuzz. New bud growth is pink fading to light green and then dark green. Spring catkins are similar to the the annually popular showy native pussy willow. Winter branch color is a vibrant reddish-pink. Very striking! If possible, plant it where you can cut branches in spring for your kitchen vase. Full sun to partial shade, soil adaptable. Like most willows, moist soils are a plus. Species native to northeastern North America. **ME Grown.** (12-18" transplants)

4192 Pink Pussy Willow, $9.00

Sorbus decora **Showy Mountain Ash** 20-25' Also known as **Northern Mountain Ash**. Small tree with a spreading rounded crown and classic mountain ash leaf shape; each of the pinnately compound leaves has about a dozen blue-green long narrow toothed leaflets, somewhat whitened on the underside. Showy bright white umbel-like blossoms in spring, large bright red berries, yellow-red fall color. Oddly enough, you can graft pears onto mountain ash. Definitely a way to surprise your neighbors. Prefers moist soils. Hardiest of the mountain ash. Native of northeast U.S. and Canada. Z2. (3-4' plants)

4207 Showy Mountain Ash, $16.50

Syringa reticulata **Japanese Tree Lilac** 20-30' x 15-25' What a treat to sit beneath a blooming tree lilac in early summer with fragrant petals dropping all around me as the bumble bees work the last snow-white blossoms. Large lacy triangular creamy-white panicles—each made up of countless tiny 4-petaled flowers—perch above the canopy of dark green foliage. Their wonderful fragrance is reminiscent of almond extract. Reddish brown cherry-like bark is grooved and checked. The tree itself has a rounded irregular habit. Strip off lower buds to ensure tree form. Full sun to partial shade and well-drained soil, with a pH of 6.5-8. Resistant to lilac borers and powdery mildew. Beautiful as a specimen or in groups. Salt- and drought-tolerant. Native of Japan. Z3. (2-3' plants) See p. 42 for other lilacs.



4212 Japanese Tree Lilac, $9.00

Malus Flowering Crabapples

I will always associate several milestones in my appreciation and love of plants with moments I shared with Roger Luce. Seeing Ludwig Spaeth lilac, eating his Red St. Lawrence (#**0677**) apple, smelling the bloom of his Brandywine crab are a few that come to mind.

I first met Roger when Mark Fulford invited him to join us at one of the fruit swaps we held at Unity College many years back. Some thirty years our senior, with his curiosity, his gentle voice and coy smile, Roger became a focal point of those annual events.

Roger returned after many years in Connecticut to his Newburgh, Maine, family farm in 1977. There he devoted himself to growing and propagating plants. By one account, his gardens included "thousands of his creations or discoveries." In a 1997 *People Places Plants* article, Paul Cappiello called Roger "the most amazing gardener in this state." His farm was also an arboretum, home to his collections of hardy magnolias, primroses, lilacs, azaleas, crabapples and more. Each of my many visits was an education and an adventure; his great love and deep knowledge of plants was infectious.

My own love of crabapples stems (pardon the pun) from those visits. I grafted many of the varieties in my collection from his trees. With his encouragement I've spent many days studying the crabs at the Lyle Littlefield Garden in Orono, the Arnold Arboretum in Jamaica Plain and the New York Botanic Garden in the Bronx. It was Roger who introduced me to John Fiala's two definitive texts, *Flowering Crabapples: The Genus Malus* and *Lilacs: The Genus Syringa*.

With his passing in 2003, we want to pay tribute to Roger. I've selected an assortment of thirteen crab varieties all from his Butternut Hill Gardens collection. Some are fairly well known while others are quite rare. I've included some of Roger's comments and observations I jotted down over the years. If you would like to pay tribute to Roger's legacy, send a contribution to the Roger Luce scholarship fund. See our website for the address.

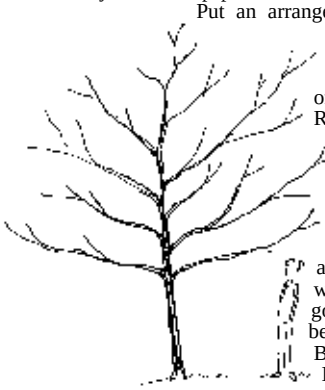
Thank you, Roger, for all you've done to infect so many of us with the joy of growing plants.

Most crabapples bloom annually in May just before the lilacs and make excellent pollinators for any apple. (3½-6' trees)

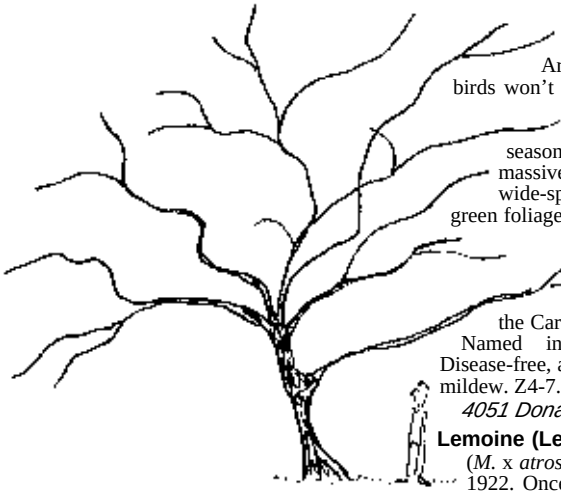
Arnold 12x16' This is a small tree. Roger recommended it for small yards. Its picturesque shape, wider than tall, is flat-topped and spreading. Round deep pinky-red buds. Attractive light pink single flowers—actually white, washed with light pink. The effect is a combination of shades of red and pink. The buds are reddest just prior to opening. Modest display of small ⅜" long-stemmed conic fruit. Yellow-green foliage. Not listed in Fiala's *Flowering Crabapples*. I suspect it's a seedling of the larger *M. arnoldia* (*M. baccata* x *M. floribunda*) which it resembles in bloom. Roger may have received it from the Arnold Arboretum or grown it from his own seed. Probably Z3-7. **ME Grown.**

4010 Arnold, $16.50

Brandywine *M. ioensis* 20x20' 'Plena' Klehm's No. 8 (*M.* x *purpurea* 'Lemoinei' x *M.* 'Klehm's Improved'). "Darn nice crab. I wish it didn't have fruit that was so large." A magnificent loosely rounded tree. Deep red buds followed by small deep pink double rose-like blossoms. They're amazing. Put an arrangement of the flowers in a vase, and people will think they really are roses. Like one of its grandparents, Klem's Improved Bechtel, Brandywine is one of *the* most fragrant crabs. Although Roger (and many others) haven't appreciated the 1½" unattractive yellow oblate fruit, it might just be a cider maker's dream come true. Very high in tannin. In a recent *Cider Digest* email, Colorado grower John Ray wrote, "You ought to try planting a crab called 'Brandywine'. WOW!!! what a real mouth-killer as far as tannin goes….Couldn't tell you the acidity because my tongue had gone dead." Blooms late, after most other crabs. Large green foliage with a red cast in spring. Z4-7.



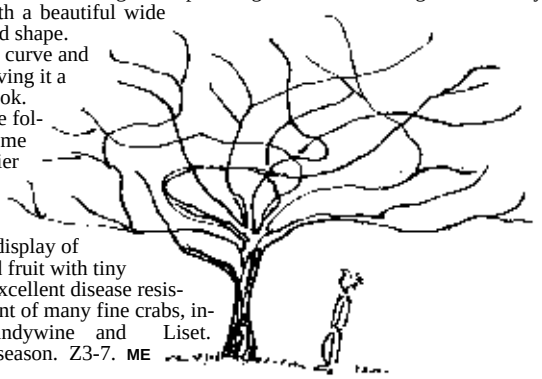
4026 Brandywine, $16.50



Donald Wyman 20x30' Chance seedling. Arnold Arboretum, 1970. "Small red fruit that the birds won't touch until spring. You can almost tell it by the fruit left on the tree all winter." Deep pink buds and large 2" single white flowers early in the season. The bloom is so intense, the tree looks like one massive flower. Beautiful medium-dense rounded and wide-spreading medium-sized tree with attractive glossy green foliage. Looks great when it has room to spread out. The shape alone is enough to recommend this cultivar. The bright ⅜" red oval fruit completely covers the tree in clusters and persists until spring. 2001 winner of the Carey Award for Distinctive Plants for New England. Named in honor of America's great horticulturist. Disease-free, although said to be slightly susceptible to powdery mildew. Z4-7. **ME Grown.**

4051 Donald Wyman, $16.50

Lemoine (Lemoinei) 18x18' (*M. pumila* 'Niedzwetzkyana') x (*M.* x *atrosanguinea*) Victor Lemoine et Fils, Nancy, France, 1922. Once the most popular red-flowering crab though no longer found in many nurseries. Deep red buds and red-purple single and semi-double flowers. Fiala calls it a "magnificent tree". It's the first crab you'd see walking down past Roger's barn into the gardens. Fairly large tree with a beautiful wide broad rounded shape. The branches curve and loop back, giving it a windswept look. Bronze purple foliage reminds me of Amelanchier in spring and still looks good in the fall. Modest display of ½" ruddy red fruit with tiny white dots. Excellent disease resistance. A parent of many fine crabs, including Brandywine and Liset. Blooms midseason. Z3-7. **ME Grown.**

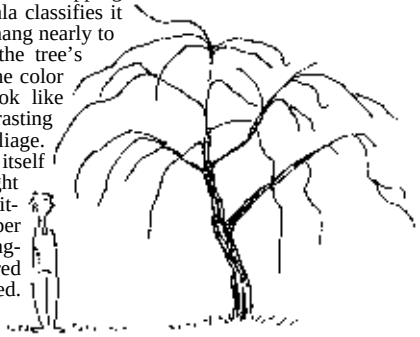


4089 Lemoine, $16.50

Pink Spires 12x15' WL Kerr introduction, Sutherland Tree Nursery, Saskatoon, Saskatchewan. "So fragrant, it sounds like there's a beehive in it." Medium-sized narrow upright tree spreading with age. Maroon foliage turns green-bronze in summer. One of the earliest to bloom every spring. Lavender buds and very light pink single blossoms. The bees love it! Of the ½" purplish-red persistent fruit, Roger said, "Birds love the fruit. They clean it." Fair to good disease resistance. Extremely hardy. Z2-6.

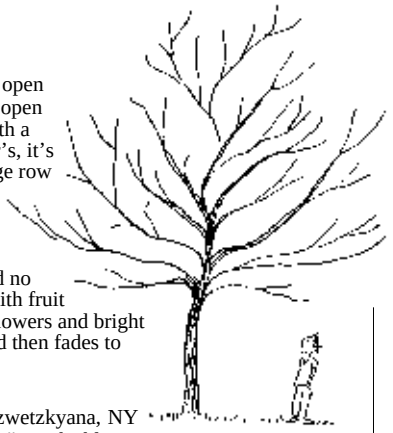
4121 Pink Spires, $16.50

Pink Weeper (Ökonomierat Echtermeyer) 12-14' x 18' (*M. floribunda* 'Exzellenz Thiel' x *M. pumila* 'Niedzwetzkyana') Spath, 1914. "I like the way it goes." Small tree with an open weeping form and a light pink bloom. One of the old-time standard weepers. It's a tree of many tufts and mounds, stepping down the rounded crown. Fiala classifies it as a semi-weeper, but it will hang nearly to the ground. Roger admired the tree's habit though he did tell me the color was too light. The buds look like clusters of pink berries contrasting with the faintly bronzed foliage. Beautiful in bud. The bloom itself frosts the foliage with light pink. Both Roger and Lyle Littlefield planted Pink Weeper next to Red Jade. The long-stemmed roundish bright red fruit is sparse and cherry sized. Subject to moderate scab. Early-mid season blooming. Z3-7. **ME Grown.**



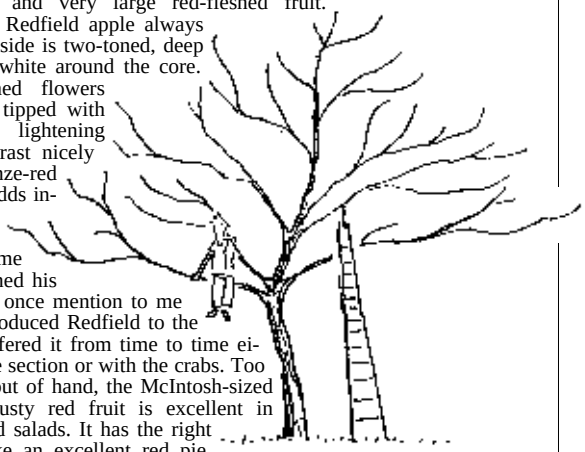
4123 Pink Weeper, $19.00

ME Grown = grown in Maine by a member of the Fedco growers coop



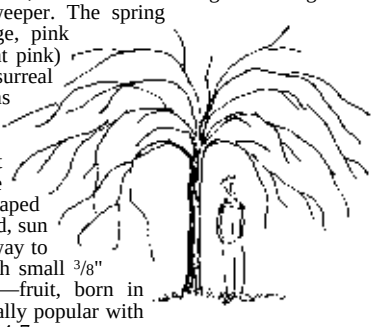
Radiant 25x25'. MN 6C (*M.* Hopa x open pollinated) U Minn 1957. Quite a tall open tree, multistemmed and spreading, with a rounded upright vase shape. At Roger's, it's backed up against the coniferous hedge row that borders the road. One year when I visited, it was still in bud. It was spectacular. Some plants really are aptly named: it was *radiant*. An outrageous mass of large red buds and no foliage. You'd think it was covered with fruit in May. Bright deep red-pink single flowers and bright red fruit. Foliage opens purple-red and then fades to bronze. Susceptible to scab. Z3-7.

4131 Radiant, $16.50



Redfield 20x30' Wolf River x Niedzwetzkyana, NY Station, 1938. "The first to bloom." Pink blooms, bronze foliage and very large red-fleshed fruit. Cutting open a Redfield apple always causes a stir: inside is two-toned, deep pink fading to white around the core. Single two-toned flowers are deep pink, tipped with small white lightening bolts, and contrast nicely with the bronze-red foliage which adds interest all season. Although he never told me where he obtained his tree, Roger did once mention to me that he had introduced Redfield to the state. We've offered it from time to time either in the apple section or with the crabs. Too tart for eating out of hand, the McIntosh-sized opaque solid rusty red fruit is excellent in sauce, jelly, and salads. It has the right tartness to make an excellent red pie, and adds color to your cider and sauce. Highly recommended. Z3-7. **ME Grown.**

4135 Redfield, $16.50



Red Jade 12-15' x 15-20' Chance seedling of *M. floribunda* 'Exzellenz Thiel', Brooklyn Botanic Garden, NY, 1953. "It doesn't get too large." Magnificent dense fine-branched weeper. The spring combination of yellow-green foliage, pink buds and single white (actually faint pink) blossoms has a magical, almost surreal quality. Changing day after day as more buds open and the greens and pinks merge and soften to white. Roger trained his to begin weeping at about 6-8 ft. You could set up table and chairs under the umbrella-shaped specimen and be protected from wind, sun or rain. The branches drape all the way to the ground. Beautifully covered with small long-stemmed light red—not pink—fruit, born in clusters up to 5 per bunch and annually popular with birds. Glossy vibrant green foliage. Z4-7. **ME Grown.**

4136 Red Jade, $19.00

Roger Luce 6' x same? Seedling of Red Jade, Roger Luce introduction, Newburgh, ME. Unfortunately I never had a chance to ask Roger about this small compact slightly disheveled weeper. The only specimen may be the one planted right by the main entrance to the Lyle Littlefield Garden in Orono. Although not yet mature, it appears destined to be a diminuative tree, a good choice for a small space. Red buds and white boom. Bright green foliage drapes to the ground. Appears to be even more weeping than its weeping parent. Red oval 1/2" fruit. Z4-7. **ME Grown.**

4143 Roger Luce, $19.00

Crabapples are really just apples in disguise. They prefer full sun and deep well-drained soils of 5.5-6.5 pH but they are quite forgiving and will thrive in many locations with a little TLC. They don't like to be drowned or starved for water, and they do need to be protected from borers, mice and deer. See pp. 6-7. For planting instructions, see p. 5.

Pruning Crabapples

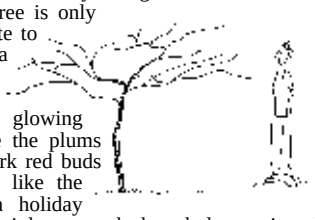
Most crabapples require little or no pruning except when a branch is broken or you feel compelled to shape your tree in one way or another. Allow each tree to assume its own unique form. Weeping crabs however do require pruning and training.

Training Your Weeping Crab

First summer: Stake the tree and do not prune it at all. Staking keeps the the tree from weeping before reaching the desired height. Tie the tip (central leader) snug to the stake.

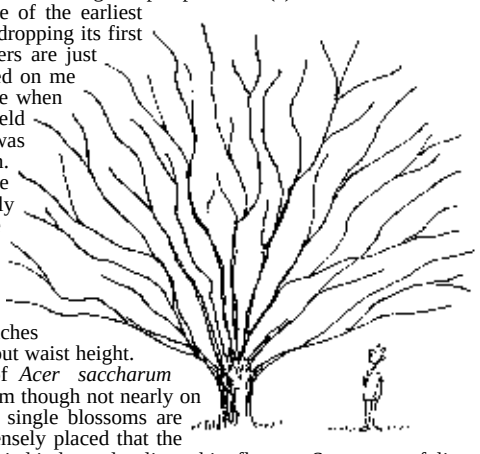
Second summer: Decide at what height you want weeping to begin. Continue to train the leader to the stake until it reaches the desired height. Leave some but not all the lower branches.

Later years: Once the leader reaches the height to begin weeping, let several branches form and begin to weep. (The nicest weepers I've seen begin weeping at about 6-8' high.) Over 2-3 years, remove all the lower branches. Eventually remove the stake. Continue to remove lower branches as necessary.



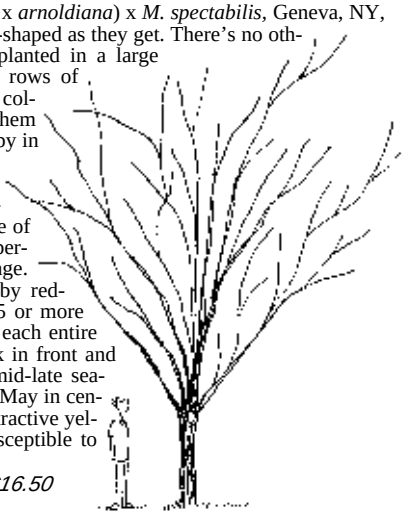
Semi-Weeping Red 10-12' x 20' Unknown parentage and origin. This is a fantastic tree. It doesn't weep but rather it snakes and crawls and reaches out across the yard, the undulating branches barely rising above a horizontal plane. Even at eight years old, my tree is only about seven feet tall. I pass it en route to the barn—often a dozen times a day—and every time I do, I marvel at its shape and color. As beautiful in January as in June. Deep rich glowing electric-red foliage opens just before the plums bloom in mid-May. The half-open dark red buds dangle in clusters below the leaves like the decorative fringe on the rim of a holiday sombrero. The fruit is red, the leaf petioles are red, the whole tree is red. Roger discovered it many years ago in a nursery near Bath, ME. Unfortunately he lost the tag; he called it Semi-Weeping Red. I've tried to track down its identity but with no luck. Roger thought it may have never caught on because the foliage is nearly as red as the blossoms, making it difficult to distinguish one from the other. That has never bothered me. Very small insignificant fruit. Z4-7. **ME Grown.**

4155 Semi-weeping Red, $25.00



Spring Snow 25-30' x 35' Dolgo x open pollinated(?), Inter-State Nurseries, 1967. One of the earliest crabs to bloom. It's dropping its first petals while the others are just waking up. It dawned on me where it got its name when I visited Lyle Littlefield Garden just as it was completing its bloom. The grass beneath the tree was completely covered with the white petals, like a *spring snow*. Large wide-spreading rounded vase shape with numerous branches fanning out from about waist height. Quite reminiscent of *Acer saccharum* (Sugar Maple) in form though not nearly on the same scale. The single blossoms are so prolific and so densely placed that the tree appears to be buried in huge dazzling white flowers. Some green foliage is visible during bloom, but not much. Never any fruit. Roger had two huge specimens. The perfect choice for those who can't wait for the later crabs to bloom or who find themselves already missing winter in May. Z3-7. **ME Grown.**

4160 Spring Snow, $16.50



Van Eseltine 20' x 10-15' (*M.* x *arnoldiana*) x *M. spectabilis*, Geneva, NY, 1942. This large crab is as vase-shaped as they get. There's no other crab like it. It begs to be planted in a large space. Occasionally you'll see rows of Van Eseltine in parks or along college driveways. Sixteen of them stand opposite Foss Hall at Colby in Waterville. Three ancient specimens frame Roger's arching "Japanese" bridge. Dense clusters of stems beginning a couple of feet from the base fan into a perfect vase, which spreads with age. Plumes of red buds followed by red-stemmed plum-pink blooms, 15 or more petals per flower. Flowers line each entire branch. Each petal is faint pink in front and reddish pink behind. Blooms mid-late season, usually towards the end of May in central Maine. Green foliage. Unattractive yellowish-brown fruit display. Susceptible to scab. Z4-7. **ME Grown.**

4174 Van Eseltine, $16.50

Woody Ornamental Shrubs

Although many of these shrubs are multi-use plants, all are cultivated primarily for their flowers, fragrance, foliage or interesting form. They range from diminutive and delicate to large and breathtaking. Some are old standards and some are relatively unknown. We plant them to reduce the amount of lawn we feel compelled to mow, while increasing the beauty and wildlife cover that surrounds us. It's great to see that lawn shrinking a bit more every year!

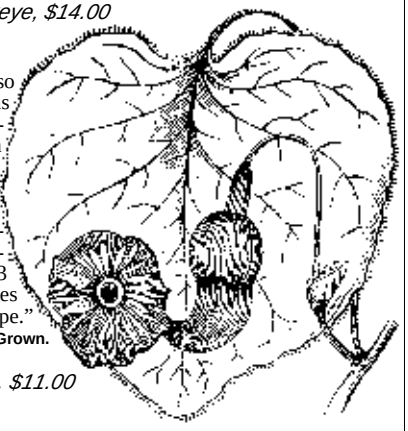
Abeliophyllum distichum **White Forsythia** 4x4' A more reliable bloomer in the North than true forsythia. Vigorous multistemmed informal rounded shrub with clusters of white spicy-scented forsythia-like flowers in very early spring. Makes a good companion for true forsythia. Prefers sunny well-drained locations, but will tolerate most soils. Cut back to 6-12" every 3-4 years. Native to Korea. Z4. **ME Grown.** (12-18" transplants)

4225 White Forsythia, $8.00

Aesculus parviflora **Bottlebrush Buckeye** 10-12' x 15' Irregular large wide multistemmed suckering shrub with beautiful horse chestnut-like foliage and jaw-dropping midsummer flowers. Forms absolutely magnificent multi-level colonies. The medium to dark green foliage turns yellow-green in fall and is always disease-free. In early summer green asparagus-like spears appear across the surface of the colony and then open up into spectacular 10-18" plume-like feathery panicles that stand upright above the foliage in a mass. It is a major show-stopper in and out of bloom. Excellent as a border plant. You can grow it in the sun but it will thrive in the shade. Prefers well-drained acid soil. Native to SE North America. Z4. (large well-rooted transplants)

4227 Bottlebrush Buckeye, $14.00

Aristolochia durior
Dutchman's Pipe 20-30' Also called **Pipe Vine**, a vigorous climber with large 4-10" heart-shaped dark green leaves. Can cover screened porch or trellis in 2-3 seasons. Sun or shade, thrives in shade. Likes well-drained soil with adequate moisture. Inconspicuous U-shaped tubular flowers in clusters of 1-3 with white base, mahogany lobes which look like a "Dutchman's Pipe." Native to eastern U.S. Z4. **ME Grown.** (2yr medium vines)



4235 Dutchman's Pipe, $11.00

Aronia arbutifolia **'Brilliantissima' Red Chokeberry** 6-10' x 3-5' In his book *Best of the Hardiest*, John Sabuco calls red chokeberry "one of our finest native landscape shrubs." Upright multistemmed form. Dense clusters of small but showy white flowers with red stamens. Dark green foliage turns spectacular crimson in the fall. Abundant persistent glossy bright red fruit birds will love. Spreads by suckers. Beautiful in masses, plantings and borders. Transplants easily. Adapted to many soils, wet or dry, but prefers moist and well-drained. Sun or partial shade. Can be trained into a small tree. Native eastern U.S. Z4. (6-12" beefy transplants)

4240 Red Chokeberry, $8.00

A. melanocarpa **Black Chokeberry** 4-6' x same. Compact rounded shrub suckers profusely to form colonies. Showy white blooms in late spring. Glossy green foliage all summer turns brilliant wine-red in fall. Attractive black berries may be palatable enough for fresh eating, but probably more suited to juice, jelly or our feathered friends. Its black fruit and glossy foliage distinguish *A. melanocarpa* from *A. arbutifolia*. Not particularly picky about where it grows. Adaptable to wet or dry areas, sun or partial shade. Disease and insect free. Native eastern U.S. Z3. (6-12" beefy transplants)

4242 Black Chokeberry, $8.00

Pruning Directions for Ornamental Shrubs, Trees and Berries

The success, satisfaction and beauty you obtain from your flowering shrubs and trees is dependent upon proper pruning. Trim shrubs for large blooms, finest foliage and best form.

Why Pruning Is Necessary

1. Most shrubs need a few of the older canes cut off at the ground line each year to encourage the growth of new young canes. This is a natural rejuvenation procedure of old canes with new.
2. Larger and better blooms are obtained with pruning as the vitality of the plant goes to the blossoms, rather than supporting heavy wood growth.
3. The natural shape of the shrub is retained by removing the poorly shaped longer branches.
4. Health, neatness and vigor are retained by removing broken, dead or diseased branches.
5. Shrubs with unusual bark coloring should have the older canes removed, as the full natural coloring is obtained only in the young new growth.
6. Certain varieties of shrubs sucker from the roots. These suckers should be removed.

Pruning shrubs is primarily thinning out older undesirable canes. Varieties such as hydrangeas, altheas, tea roses, tamarix and dogwoods should have all canes pruned back to produce larger flowers or more brightly colored canes.

The nature of growth of a tree may be controlled by pruning. If you desire a tall tree with a high crown, prune the lateral branches from the trunk and prevent formation of low crotches. For a low, stocky tree used in screens and windbreaks, cut back the top shoots to force side growth.

Remove oldest wood and center branches (a few each year).

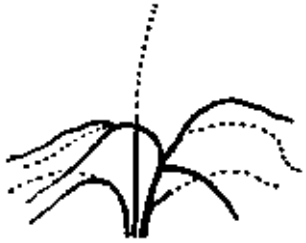
Prune Late-Flowering Shrubs Early

Early pruning does not remove any flower buds from shrubs which bloom in mid-summer, since all early buds on the plants produce leaves only. Flower buds develop on new growth to bloom in late summer.

Prune Early-Flowering Shrubs Later

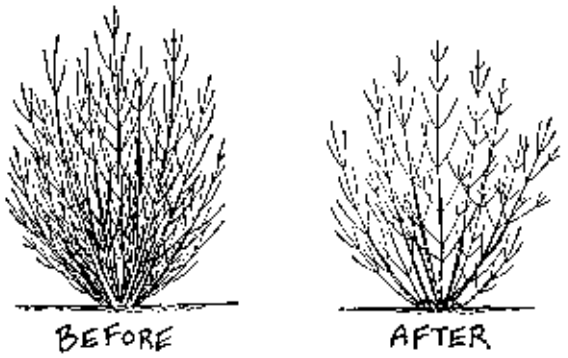
By pruning in March, many flowering buds would be removed. The season's flowers already exist in bud form. After blooms fade, pruning may be done without harm to buds. Prune during season specified, as late pruning will injure next year's buds.

Retain natural arching habit by pruning branches after flowering. Otherwise new growth starts at the tips of flowering branches and the shrub gets top-heavy.



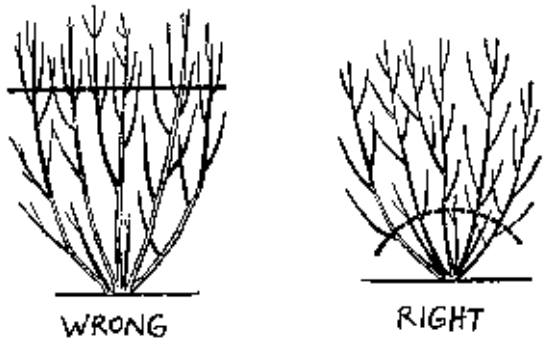
Pinch off the growing tips and remove flowers as soon as faded.

Prune For Healthy Growth



Before
Your shrubs will tell you when they need thinning. Shrubs such as Honeysuckle send up too many canes for best growth. Cut off a few of the oldest and least vigorous branches close to the ground. Do not injure bark on canes to be saved.

After
Note the difference thinning of canes makes. Air and light can now penetrate. Fewer canes promote vigor, health and vitality. Plants will produce more and larger blossoms. Slow growing, less vigorous shrubs seldom need thinning out.



Prune For Symmetry and Appearance
Cutting back tops of shrubs straight across is a common error. This encourages top-growth and the lower part of the shrub, with no foliage near the base, becomes woody and unsightly. Growth stays low and bushy when properly pruned.

Proper pruning promotes growth at the base of the shrub. Larger flowers on hydrangeas, altheas, hybrid tea roses, tamarix and butterfly bush are obtained by severe pruning. Colorful branches and twigs on dogwoods develop on new stems.

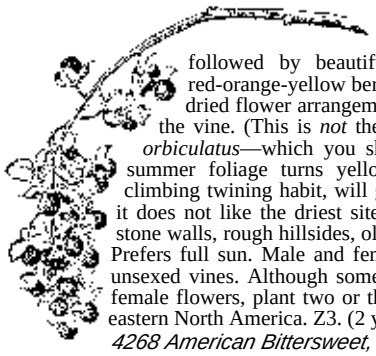
What To Do with Over-Grown Shrubs
Overgrown shrubs with little foliage near the base may be rejuvenated by cutting down each cane at the ground line in early March. All overgrown shrubs should be pruned thusly, even though early blooms may be sacrificed.

Shrubs cut back for rejuvenation will send forth new shoots in the late spring. This growth will be bushy with foliage clear to the ground. Pinch off tops of growth when desired height is attained. It usually takes two to three years to rejuvenate shrubs and hedges completely.

Caragana arborescens **Siberian Pea-shrub** 15-20' Cheerful bright green upright multistemmed oval shrub well-suited for windbreaks, hedges and borders. Delicate yellow flowers in spring are followed by small seed pods. The pods and the pea-sized seeds are edible though I've never been quite been that hungry. Chickens supposedly go for them. Silvery bark and compound foliage, each with 8-12 small obovate leaflets. Nitrogen fixing. Easy to grow, maintenance free. Just put them in and let them go. Adaptable to poor soils, drought, salt. Full-sun. Sometimes appear on invasive lists though none I've seen recently. Ours have stayed put for twenty years and not spread by seed or root. Native to Siberia and Manchuria. Z2. (18-24" plants)

4267 Siberian Pea-shrub, $8.00

Celastrus scandens **American Bittersweet** or **False Bittersweet** 20' or more. A highly ornamental native vine. The insignificant flower display in spring is followed by beautiful grape-like clusters of small red-orange-yellow berries for holiday wreaths and other dried flower arrangements. Also quite beautiful right on the vine. (This is *not* the invasive Asian Bittersweet—*C. orbiculatus*—which you should never grow!) Deep glossy summer foliage turns yellow-green in fall. Very vigorous climbing twining habit, will grow in nearly any soils although it does not like the driest sites. Suitable for covering porches, stone walls, rough hillsides, old cars and unsightly outbuildings. Prefers full sun. Male and female required for fruit. These are unsexed vines. Although some plants may have both male and female flowers, plant two or three plants to ensure fruit. Native eastern North America. Z3. (2 yr medium plants)



4268 American Bittersweet, $8.00

Cephalanthus occidentalis **Buttonbush** 6-10' x 8' The masses of buttonbush bordering the shores of Massachusetts' Sudbury River are in full bloom each July as we follow Thoreau's "footsteps" in our kayaks. The spherical other-worldly-looking fragrant white flowers, up to 1" across, crawl with honey bees. Flowers appear for 4-6 weeks in summer and look like a cross between "sputnik," an "eighth-grade Helium-atom science project," and "one of those hats Sun Ra wore during his intergalactic music concerts." They make interesting dried flowers. The loose rounded branchy shrubs with bright green foliage seem to be growing *in* the river. Plant beside your stream or pond, *in* your pond, or even on an old floating log. It will secure its roots to the muck below and feed the ducks with its seeds (nutlets) in the fall. Recommended for naturalizing. Native to eastern U.S., west to New Mexico. Z4. **ME Grown.** (1-2' transplants)

4270 Buttonbush, $9.00

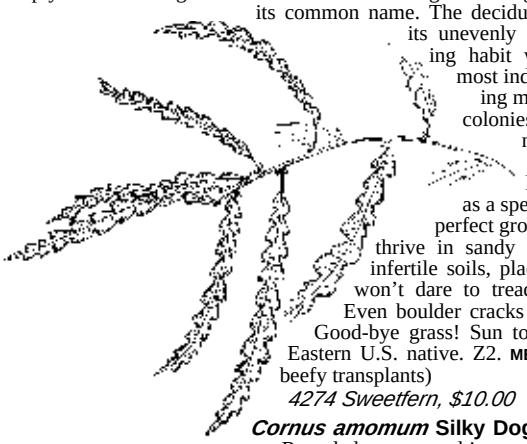
Chaenomeles lagenaria 'Rubra' **Red Flowering Quince** 4-6' x same. A multistemmed wide vase-shaped somewhat arching rounded shrub that I've had growing by the path up from the driveway for 20 years now. Looks good all season. The long bloom time is one of the brighter signs of spring. Prolific and showy 5-petaled crimson red flowers appear just before the foliage. The leaves are shiny dark green and slightly leathery, reminiscent of holly. Regularly sends up more stems but never seems to spread that much. The medium-sized fruit is edible but bitter. (This is not the edible Quince, *Cydonia oblonga*, of Owl and Pussycat fame.) However, it is valued for its culinary and medicinal qualities in east Asia. Average acid soil. Sun to partial shade. You might get better fruiting in full sun. Native to east Asia. Said to be Zone 5 but mine has done well in Zone 4. **ME Grown.** (2-3' plants).

4271 Red Flowering Quince, $9.00

Clethra alnifolia **Clethra 'Ruby Spice', Summersweet** or **Sweet Pepperbush** 4-5' x same. Sport of 'Pink Spires', Broken Arrow Nursery, Hamden, CT, 1992. A recent *New York Times* article calls Clethra "a plant that sounds almost too good to be true." Red buds and beautiful spires of heavenly scented deep pink flowers appear on racemes for 6 weeks in midsummer. Bees and butterflies love it but not so rabbits and deer. Whorls of extremely attractive finely serrated distinctly veined dark green foliage turn deep gold in fall. Dangling racemes of "peppers" persist into the next growing season. Erect rounded-oval habit, often suckering to form dense colonies. Very easy to grow. Slow growing. Prefers acid moist well-drained soils. A good shrub to border streams and ponds. Will tolerate salty coastal conditions. Full sun to shade. Pest free. Native from Maine to Florida. Z3. **ME Grown.** (1-2' transplants)

4273 Ruby Spice Summersweet, $9.00

Comptonia peregrina **Sweetfern** 2-4' x spreading. The narrow 3-6" deeply incised dark green aromatic fern-like foliage is what gives Sweetfern its common name. The deciduous shrub with its unevenly mounded arching habit will sucker almost indefinitely, creating maintenance-free colonies, a magnificent no-frills alternative to the lawn. Very nice as a specimen or a near perfect ground cover. Will thrive in sandy gravelly sterile infertile soils, places when grass won't dare to tread. Dry or wet. Even boulder cracks and roadsides. Good-bye grass! Sun to partial shade. Eastern U.S. native. Z2. **ME Grown.** (8-12" beefy transplants)



4274 Sweetfern, $10.00

Cornus amomum **Silky Dogwood** 6-10' x same. Rounded rangy multistemmed shrub with attractive purple-red stems which are especially beautiful in winter. Valuable for naturalizing borders, streams and wetlands. Effective in masses or even windbreaks. Medium-fast growing. Yellowish-white flowers in late spring followed by sprigs of blue berries in midsummer that sit above the medium green foliage. Purple fall color. Deer will browse the stems and leaves and traveling songbirds and local fowl will browse the berries. Prefers moist well-drained soils, although it is adaptable even to somewhat poorly drained wet locations. Does not like droughty spots. Sun or partial shade. Easy to transplant. Native eastern U.S. Generally listed as Z5 but probably hardier. Z4/5. **ME Grown.** (8-12" beefy transplants)

4277 Silky Dogwood, $10.00

C. sericea **'Silver and Gold' Dogwood** 6-8' x 8-10' Selection of 'Flavirmea' Mt. Cuba Center, Greenville, DE, 1987. Broad loosely rounded multistemmed shrub that spreads freely by stolons (underground stems) and forms excellent masses and borders, also useful as a specimen. Interesting variegated foliage with a creamy-white edge. 2-3" clusters of white flowers in spring followed by white berries that the birds will scarf up as fast as they ripen. Bright yellow stems provide winter interest. A perfect plant for swamps, streams and wetlands. Excellent for erosion control. Very adaptable to a range of soils and climates, but generally likes it wet wet wet. Sun or partial shade. Easy to transplant. To improve stem color, prune out older stems in the spring. Winner of the Styer Award in 1990. Native eastern U.S. Z2. (6-12" beefy transplants)

4281 Silver and Gold Dogwood, $10.00

Corylus avellana **'Contorta' Harry Lauder's Walking Stick** 6-12' x 15-20' Discovered in Frocester, Gloucestershire, England, 1863. A non-fruiting European filbert with a dense mounded form, grown for its contorted branches, leaves and catkins. Branching begins low and curves, twists and curls from the largest branch down to the tiniest twig. Even the drooping foliage is wrinkled and curled. It's a completely wonderful sight. Highly attractive year round, but especially in winter. Also used in flower arrangements, canes, handles and ornamental woodworking. Smoky dark grey—almost black—bark. Prefers well-drained loamy soil, full sun to partial shade. Remove root suckers as they appear. Not truly hardy in Zone 4 although mine survived this past snowless winter with minimal dieback. Z4/5. (1-2' transplants)

4283 Harry Lauder's Walking Stick, $33.00

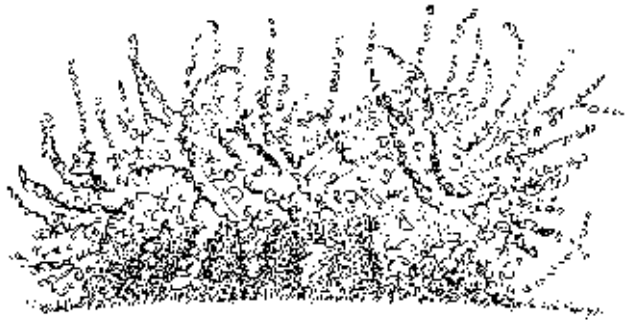
Cotinus coggygria **'Royal Purple' Smokebush** 8-10' x same. Boskoop, Holland. Upright spreading shrub with velvety dark purple foliage and amazing purplish-pink inflorescences that look like large smoke puffs on top of the branches throughout summer. Each one of these cotton candy-like poofs is composed of a web of fine stems, the smallest of which are lined with tiny hairs that reflect the light and create an ethereal effect. It's really quite remarkable. For maximum glow, plant in a sunny location. Often considered a Zone 5 plant, but reliably grows back and flowers each summer in Zone 4. Cut to the ground each fall for more vigorous and more brightly colored growth. Red-burgundy fall color. Adaptable to a wide range of pH and soils although it prefers it well-drained. Disease free. Native southern Europe to China. Z4. (6-12" beefy transplants)

4285 Royal Purple Smokebush, $8.50

Euonymus alatus **'Compactus' Burning Bush** Due to its inclusion on every invasive species list we've seen, *we no longer offer* Burning Bush. For fall color, we highly recommend Aronia arbutifolia, Aronia melanocarpa or Fothergilla. All three are excellent natives with fantastic fall color.

Forsythia **x** ***ovata*** **'Northern Gold' Forsythia** 6-8' x 5-7' Ottawa, Canada, 1979. This was a good spring to see who was planting Northern Gold and who was planting the junk that some nurseries are passing off on unsuspecting gardeners. If your forsythia bloomed only from the snow-line down, you were duped. Northern Gold has not only the outstanding bud hardiness necessary for flower production *above* the snow line, but also outstanding golden-yellow flowers. You can have a full bloom every year! Upright form with grey-yellow branches clad in rich green healthy foliage. Prefers moderately fertile, slightly acid to neutral soils with good drainage. One of the first flowers in spring. Bred from *F. ovata*, a hardy dependably blooming Korean species. Z3. (1-2' transplants)

4340 Northern Gold Forsythia, $8.50

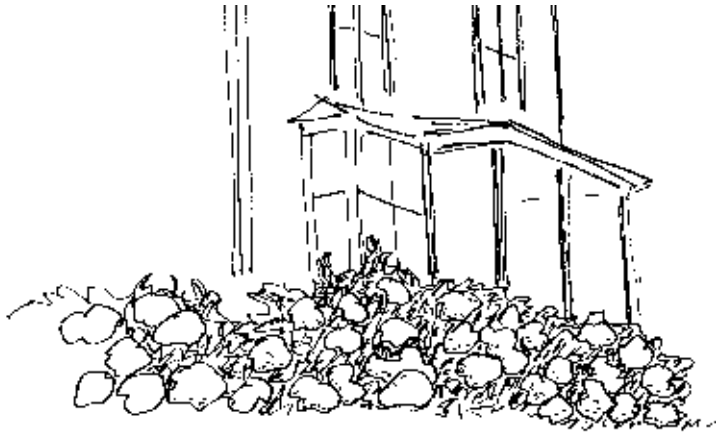


Fothergilla major **Large Fothergilla** 6-10' x same. Magnificent rounded multistemmed shrub with slender crooked branches becoming dense with maturity. Amazing small creamy-white honey-scented bottlebrush-shaped flowers (inflorescences) with long showy stamens. Blooms in spring, usually around lilac time. Attractive dark green to blue-green leathery leaves turn brilliant yellow, orange and scarlet, often on the same leaf, in fall. A great shrub year-round. Prefers moist well-drained peaty acidic soil but is very adaptable. Sun to 2/3 shade. Disease- and pest-free. Native to southeastern U.S. Z4. **ME Grown.** (8-12" beefy transplants)

4358 Large Fothergilla, $10.00

Hydrangea arborescens **'Annabelle' Hydrangea** 3-5' x same. A major improvement over the old standard herbaceous hydrangea. A very upright yet rounded shrub, the earliest and most erect of the hydrangeas. Large clusters (up to 1') of showy white to faint-yellow flowers bloom in late June till September. Big 5-6" almost heart-shaped foliage. Grows fast, suckers freely, thrives in shade. Cut to the ground and fertilize lightly in late winter for stunning bloom next summer. Suited to perennial borders and naturalized gardens. A Pennsylvania Horticultural Society's Gold Medal Plant Award winner. Species native to eastern U.S. Z3. **ME Grown.** (1-yr #1 plants)

4375 Annabelle Hydrangea, $12.00



***H. macrophylla* 'Endless Summer' Hydrangea** 3-5' x same. Bailey Nursery Introduction, St. Paul, MN, 2004. This is the blue flowering hydrangea that is causing all the hoop-la in the gardening world. Perhaps you saw it on the cover of *People, Places & Plants*. Why is Fedco offering such a trendy plant you might ask? For good reason. Most Bigleaf Hydrangeas (*H. macrophylla*) bloom only on old wood. After a typical Maine winter you get dead flower buds and no flowers. 'Endless Summer' blooms on old and new wood. Even if the plant dies to the ground, you'll get those large showy 8" mop-head blooms *that* summer. Not only that, but it will bloom blue in acid soils and pink is alkaline soils. Dense dark green foliage. Bronze fall color. Sun or partial shade. Prefers deep well-drained acid soils with lots of organic matter. If your soil needs acidification, check out the article in the Summer 2003 *People, Place & Plants* for some good suggestions. Native to Japan. Z4. (medium plants)

4377 Endless Summer Hydrangea, $18.50

***H. paniculata* 'Grandiflora' Pee Gee Hydrangea** 8' x 10-15' Large upright woody shrub with arching branches and very showy large conical double white flower-clusters that bloom July-August, turning pink-bronze in autumn. Small serrated yellow-green leaves illuminated with a fine yellow edge. Prefers good loamy moist well-drained soil in sun or partial shade, but difficult to kill; urban tolerant. Species native to North and South America and eastern Asia. Z4. **ME Grown.** (6-12" beefy transplants)

4380 Pee Gee Hydrangea, $10.00

***Ilex verticillata* Winterberry** A staple of the Maine landscape. Deciduous suckering holly with clusters of upright stems. Lustrous deep green leaves retain their color long after they're cut for decoration. Richly foliated, but open enough to display its interesting branching structure. Best known for its profusions of bright red 3/8" berries which stand out after the leaves have fallen and keep their color all winter, looking spectacular against the snow. Excellent fall wildlife forage plant. Tolerates dry conditions but prefers moist or wet acidic soil, even standing water. Sun or partial shade. No serious pests or diseases. Male and female plants required for fruit. Plant males within 30' of females. Native from midwestern to eastern U.S. Z4.

***I.v.* 'Red Sprite'** 3-5' x 4-8' Female plant. USDA introduction. Smaller plant than the straight species with an attractive low loose rounded form. Winner of the 1998 Cary Award for Distinctive Plants for New England. 'Jim Dandy' male required for fruit. (6-12" beefy plants)

4398 Red Sprite Winterberry, $10.00

***I.v.* 'Jim Dandy'** 3-6' x 4-5' Male selection to pollinate 'Red Sprite' winterberry. One will pollinate several females. **ME Grown.** (6-12" beefy plants)

4400 Jim Dandy, $10.00

***I.v.* 'Winter Red'** 9x8' Female plant. Larger than 'Red Sprite'. Darker green foliage. Winner of the 1995 Styer Award. 'Southern Gentleman' male required for fruit. **ME Grown.** (16-18" transplants)

4403 Winter Red Winterberry, $10.00

***I.v.* 'Southern Gentleman'** 6x6' Male selection to pollinate 'Winter Red' winterberry. Don't be deceived by the name—it's hardy. One will pollinate several females. **ME Grown.** (8-12" beefy transplants)

4405 Southern Gentleman, $10.00

***Kolkwitzia amabilis* Beautybush** 6-10' x 6-8' Fast-growing multi-stemmed shrub that likes to have plenty of room for its old-fashioned slightly unkempt arching vase-shaped form. Blooms in June, just before the Mockorange and after the lilacs. Completely covered with small fragrant medium-pink 5-petaled tubular flowers, each throat etched with a web of yellow-orange veins and dots. The blossoms appear on the side shoots of every stem, up to 20 per cluster. There are literally thousands on a mature specimen. While the overall appearance is pink, the effect of the orange throat is to enrich the color. A real knock-out. Matt bluish-green slightly rugose foliage. Brown and gray exfoliating bark. Yellow and red fall color. Flowers can be forced indoors in spring. Prune after flowering, removing the oldest branches back to the ground. Excellent as a specimen or background shrub for shorter plantings. Easy to grow in any type of soil. Prefers full sun. No serious pests or disease. Native to Central China Z4. **ME Grown.** (18-24" transplants)

4445 Beautybush, $10.00

***Lonicera* x *brownii* Dropmore Scarlet Honeysuckle** 10-20' (*L. sempervirens* x *L. hirsuta*) Tall climbing honeysuckle developed by FL Skinner in Manitoba. Jazzy whimsical clusters of 1 1/2" scarlet-orange tubular flowers bloom profusely and tirelessly from early summer into late fall. Striking blue-green foliage on red stems. Great for fence or arbor. Easy to grow; generally free of insects and diseases. Flowers the first year. Considered the hardiest vine honeysuckle. Z3. **ME Grown.** (8-12" beefy transplants)

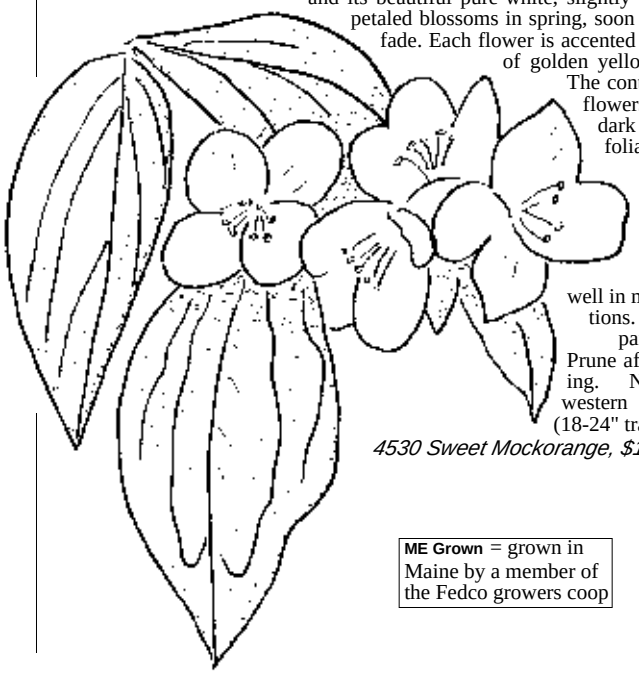
4450 Dropmore Scarlet Honeysuckle, $10.00

***Myrica pensylvanica* Bayberry** 5-9' Rounded deciduous semi-evergreen very salt-tolerant shrub thrives in full sun to partial shade, sandy poor soils to heavy clay soils. A common sight on Maine's coastal islands. Rubbing the glossy deep green leaves between your fingers produces one of the most delicious smells in the world. Excellent in masses or hedges, tends to sucker. Fixes nitrogen. Small greyish-blue waxy berries produced on female plants are highly aromatic, historically used for candle making. Plants feed numerous wildlife species and are especially craved by swallows. Tends toward being dioecious. Male and female plants required for good fruit development. We're offering unsexed plants. Native to eastern U.S. Z2/3. **ME Grown.** (9-12" transplants)

4480 Bayberry, $8.00

***Philadelphus coronarius* Sweet Mockorange** 10x10' An old favorite you don't see offered much anymore. We offer the straight species because it is the only mockorange that flowers reliably up here. Large coarse loosely upright arching fragrantly blooming shrub. Loved for its sweet alluring scent and its beautiful pure-white, slightly cupped, 4-petaled blossoms in spring, soon after lilacs fade. Each flower is accented by a spray of golden yellow anthers. The contrast of the flowers and deep dark blue-green foliage is lovely. Prefers moist rich well-drained soils, but will grow well in most conditions. Full sun to partial shade. Prune after flowering. Native to western Asia. Z4. (18-24" transplants)

4530 Sweet Mockorange, $10.00

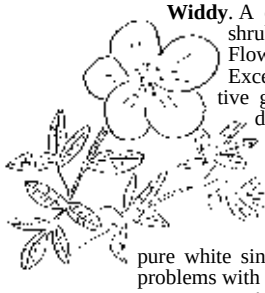


ME Grown = grown in Maine by a member of the Fedco growers coop

***Physocarpus capitatus* 'Tilden Park' Prostrate Western Ninebark** 1x10'. A 1976 selection of the rare Western Ninebark, Tilden Park is an excellent and highly unusual ground cover. Located in Berkeley, Tilden Park is also the name of California's largest botanic garden devoted to native plants. With its lustrous thick maple-like foliage, the plant will spread 10 feet while never growing much taller than 12 inches. Its rounded white flower clusters resemble "snowball" viburnum or spirea. The species is so rare that it's seldom listed in any texts. Be the first on your block! Adaptable but prefers damp soils in the wild. Native to western U.S. Z4. **ME Grown.** (18-20" transplants)

4537 Tilden Park Ninebark, $10.00

***Potentilla fruticosa* Potentilla** Also called **Shrubby Cinquefoil** or **Widdy**. A compact rounded to broadly rounded bushy shrub with showy five-petaled rose-like flowers. Flowers all summer long, beginning the first year. Excellent landscape plant with very small attractive grey-green compound leaves, for shrub borders, low hedges, foundations. Full sun or partial shade. Loved by bees. Best in fertile moist well-drained soil, but tolerates poor dry soil. Unbelievably hardy. Native to Northern Hemisphere. Z2. (9-18" beefy plants)



***P. f.* 'Abbotswood'** 2-3' x same. Prolific, pure white single flowers with light yellow stamens. Few problems with insects or disease. Originated in Holland.

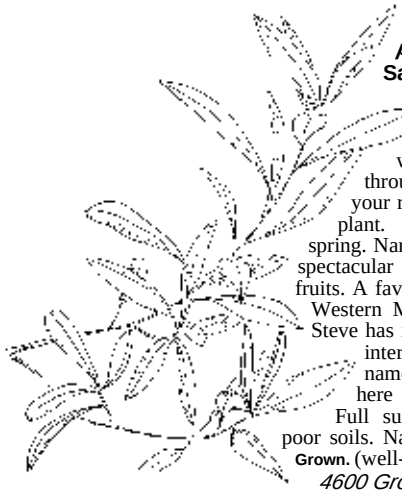
4574 Abbotswood, $8.50

***P. f.* 'Gold Drop'** 2-3' x same. Very compact, with slender upright stems, grey-green fern-like leaves and perfect bright lemon-yellow 1" flowers. Blooms all summer.

4577 Gold Drop, $8.50

***P. f.* 'Mango Tango'** 2x2' Univ of Manitoba introduction, Canada. Unusual tri-color orange, red and yellow blooms. Bright green foliage. Colors look brightest in cool weather and full sun.

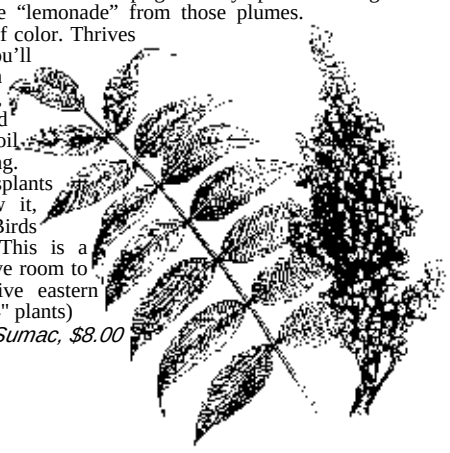
4583 Mango Tango, $8.50



***Prunus pumila* var. *depressa* 'Catskill' Ground Sand Cherry** 2'x15' USDA introduction. Low growing "shrub" with beautiful undulating runners that will creep and wind their way through your garden or across your rock wall. This is a very cool plant. Pinkish-white flowers in spring. Narrow deep green foliage turns spectacular orange-red in fall. Edible fruits. A favorite plant of Steve Effner at Western Maine Woodies in Fryeburg. Steve has introduced us to many of the interesting and unusual native ornamentals that have appeared here during the past few years. Full sun to light shade. Tolerates poor soils. Native to eastern U.S. Z3. **ME Grown.** (well-rooted #1 plants)

4600 Ground Sand Cherry, $9.00

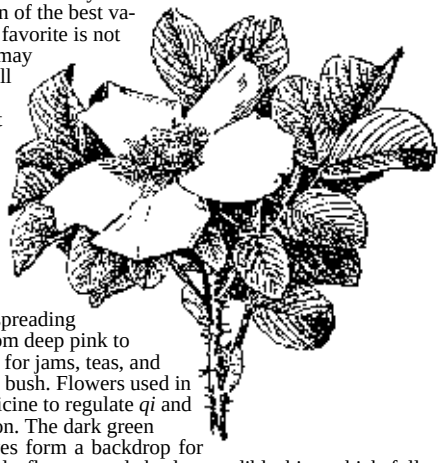
***Rhus typhina* Staghorn Sumac** 15' x same. Fast growing suckering spreading irregular exotic tropical-looking shrub or small tree with large frond-like compound foliage and amazing red fruit "plumes" that look like the kind of thing the marching band has on the front of their hats. Towards the end of July the plumes—stiff upright hairy panicles—begin to redden-up. You can make "lemonade" from those plumes. Spectacular scarlet fall leaf color. Thrives in dry infertile soils. You'll most often find them growing along roadsides, railroad tracks or woodland edges. Tolerates soil compaction and everything. Sun to partial shade. Transplants easily. Before you know it, you'll have a colony. Birds will feast on the fruit. This is a wonderful plant if you have room to let it do its thing. Native eastern North America. Z2. (18-24" plants)



4624 Staghorn Sumac, $8.00

***Rosa* Rose** Exceedingly hardy, vigorous, disease- and pest-resistant, and significantly easier to grow than most named varieties, these roses need not be pampered; all are rugged and hard to kill, forming beautiful hedges. Recommended as a solution for those who want roses but are tired of struggling with tender hybrid tea roses, or who associate roses with pests, nasty poisons, disease and winterkill.

We focus on hardiness and fragrance in our rose selections. If the description says very fragrant, it is! Each year we offer a different selection of the best varieties available. If your favorite is not on the list this year, we may be offering it in 2006. All roses are stocky well-rooted plants that we cut back to about 6" to encourage optimal growth and bloom. (stocky well-rooted plants)



Rosa rugosa 4-6' x same. Also called **Japanese Rose** or **Beach Rose**. Vigorous spreading shrub. Flowers range from deep pink to white. Red hips up to 1" for jams, teas, and fresh eating right off the bush. Flowers used in traditional Chinese medicine to regulate *qi* and promote blood circulation. The dark green wrinkled, "rugose" leaves form a backdrop for the highly fragrant single flowers and the large edible hips which follow. Blooms form on both old and new wood, so pruning is unnecessary except to control size. Likes full sun, well-drained fertile soil with a pH of 6-7, but will grow in depleted soil and even sand. Tolerates salt, pollution, and drought; practically care-free. Native to China and Japan, and a common sight all along the New England coast. Z2. (2-2TR 3-4')

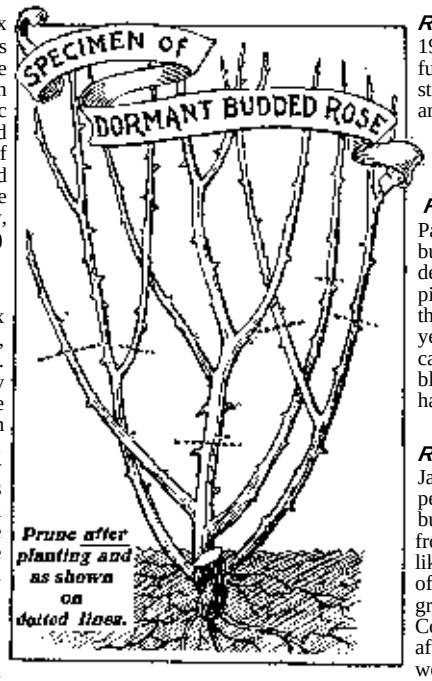
4627 Rosa rugosa, bundle of 3, $16.50

***R. r.* 'White Rugosa' Rose** 4-6' x same. Pink buds and large 2-3" pure white single flowers with cream-colored stamens. Fragrant, recurrent bloomer. Large orange hips. Orange and scarlet fall foliage color. Incredibly rugged, tolerates clay, muck, sand and salt. Disease resistant. Z3. (stocky well-rooted plants)

4630 White Rugosa Rose, $10.00

***R.* 'Blanc Double de Coubert'** 5x4' *R. rugosa* x Sombreuil. Cochet-Cochet, France, 1892. Susan's favorite double white, and one of her all-time favorite roses, has recurrent blooms with lush fragrance. Some doubles are fluffy, but Blanc Double's large (2½"-3") blossoms are smooth and substantial, almost as if they were carved out of snow-white ivory. Begins blooming in June and continues all summer. Infrequent hips. Attractive dark shiny green foliage. Good fall color. Healthy, open, vigorous shrub. Z3. (stocky well-rooted plants)

4633 Blanc Double de Coubert Rose, $10.00



***R.* 'Champlain'** 3x3' (*R. kordesii* x seedling) x (Red Dawn x Suzanne). Explorer Series, Canada, 1982. Compact bushy disease-free shrub-type rose. Clusters of semi-double lightly fragrant 2-3" nearly perfect intense red velvety flowers with only the slightest hint of pink or purple. Outstanding in bloom. Visitors are transfixed by this rose. So am I. Small center of yellow stamens. Petals, slightly wrinkled but never frilly, turn somewhat purple as they fade. Flowers appear in early July in central Maine and continue until hard frost. Named for the explorer Samuel de Champlain who is said to be the first European to cultivate roses in North America. May die back during colder winters. Z3-4. (stocky well-rooted plants)

4643 Champlain Rose, $10.00

***R.* 'John Davis' Rose** 10' (*R. kordesii x* unnamed seedling) x Unknown. Explorer Series, Canada, 1986. Vigorous "climber" with an arching form, suitable for trellis, arbor or porch post. Even allowing it to sprawl along the stone wall would show it off quite well. Large (3-3½") lighty fragrant double old-fashioned blooms of rich candy-pink, each flower with up to 40 petals and showy golden yellow stamens. Recurrent bloomer. Red canes and glossy foliage. For the most vigorous growth and the most height, give it a rich soil. Disease free. Z3. (stocky well-rooted plants)

4679 John Davis Rose, $10.00

***R.* 'J.P. Connell'** 4x3' Arthur Bell x (Von Scharnhorst x open pollinated). Explorer Series, Canada, 1987. Large yellow buds remain a beautiful yellow as they swell and finally open, then fade to a creamy apricot-tinged white, revealing their stiff golden stamens. The recurrent fully double blooms are intensely fragrant. Dense upright form with glossy rich green foliage. Will take at least a couple of years to get well established. Disease resistant. Z3. (stocky well-rooted plants)

4681 JP Connell Rose, $10.00

***R.* 'Magnifica'** 4x5' Unknown parentage. Van Fleet, USA, 1905. Large clusters of large loosely double deep fuchsia-purple-red flowers with showy bright golden stamens and a spicy fragrance. Not to be confused with another rose of the same name, this is the Magnifica Rugosa. Dense shrub with large glossy dark green foliage. Orange-red hips. Z4. (stocky well-rooted plants)

4687 Magnifica Rose, $10.00

***R.* 'Morden Sunrise'** 3x3' Sunsprite x unnamed seedling. Parkland Series, Manitoba, Canada, 2000. Yellow-orange buds open to semi-double multi-colored flowers, each one a deep rich yellow in the center fading into orange and then pink at the blossom edge. The colors are strong and vibrant: this is a rose on fire. Fragrant flowers mature to a creamy yellow-white. The low-growing shrub blooms all summer on canes that turn reddish brown in winter. Resistant to blackspot. Did show some dieback after last winter though it has recovered nicely. Z3. (stocky well-rooted plants)

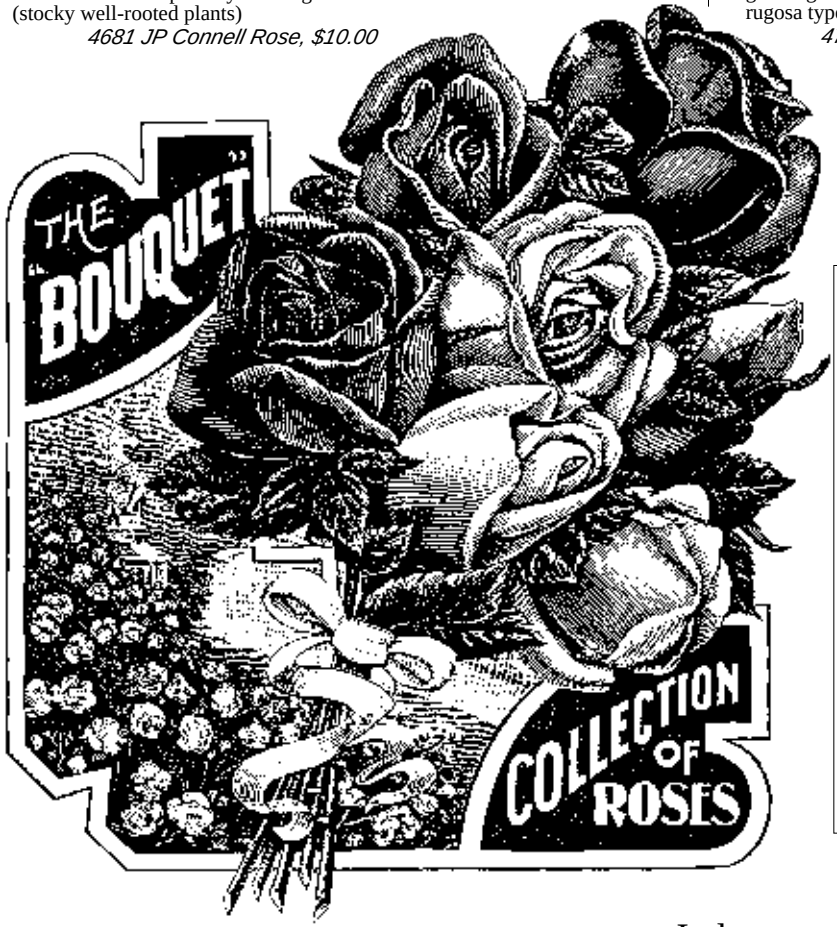
4697 Morden Sunrise Rose, $10.00

***R.* 'Seven Sisters'** 10-15 x 4' *R. multiflora* 'Platyphylla'. Japan, 1817. Clusters of seven perfectly shaped and tightly petaled petite fragrant 1-2" double flowers, like little frilly buttons, bloom simultaneuously in seven different colors from creamy white to various pinks to reds to crimson. It's like having an entire rose garden on one bush. Blooms most of July up here. A strong climber that can also be used as a ground cover or a rambler. Large dark green foliage. Covered with tiny red hips in fall. Showed some dieback after last winter but has recovered nicely. Z4. (stocky well-rooted plants)

4710 Seven Sisters Rose, $10.00

***R.* 'Therese Bugnet'** 6x4' [(*R. acicularis* x *R. kamtchatica*) x (*R. amblyotis* x *R. rugosa plena* (x 'Betty Bland')] Alberta, Canada, 1950. Vigorous upright vase-shaped plant. Extremely fragrant large 3-4" double soft lilac-pink flowers that have an informal "old rose" look. Blooms in late spring and fall with some repeats all summer. Long narrow grey-green foliage turns red in fall. Red canes look particularly beautiful in the snow. Disease resistant. Fast growing and one of the hardiest of the rugosa types. Z3. (stocky well-rooted plants)

4718 Therese Bugnet Rose, $10.00



Roses prefer full sun (at least 4-6 hrs per day) and a pH of 6.0-7.0. Space them 4-6' apart. They will do well in most well-drained soils with a good amount of organic matter. In locations with poor drainage, add gravel at the bottom of the planting hole, or build in drainage. Pick a site with good air drainage, but avoid sites with cold northwest winds. Avoid competition with tree roots.

Plant roses as early as soil can be worked. Most roses' roots don't spread beyond the original hole, so dig a bushel-basket sized hole, as deep as 2' or more. We recommend a bale of rotten hay in the bottom of the planting hole. Mix soil with well-rotted manure and compost in liberal quantities. Add a coffee-can full of rock phosphate or bone meal.

Soak in water overnight or up to three days before planting. Prior to planting, prune roses back to 3 canes, 4-5" tall. Plant them 1" below the level they were in the nursery. Add water as you fill in the hole to puddle it in. Mound soil around branches to prevent them from drying out, and to encourage buds to sprout. As the buds open, pull back the soil to the correct level.

Shrub roses and climbers will require little pruning in later years. Remove dead or broken branches, and periodically cut out the oldest wood. Keep them well mulched to retain moisture and reduce weeds. Add 2 shovels full of composted manure to each crown late in the fall. For more information see *Growing Old Fashioned Hardy Roses Organically* by Suzanne Verrier in the book section of our Seed Catalog.

Syringa **Lilac** is known nearly everywhere by some variation of the Persian word *lilak* (meaning 'bluish'), but lilacs actually come in colors ranging from brilliant white to pink to red to every conceivable shade of purple and even blue. From small shrubs to large shrubs and trees, compact vase-shaped specimens to huge rounded spreading masses, only the crabapple offers greater selection among ornamental woody plants. Twenty-three species make up the genus *Syringa*, two of which are native to the limestone mountains of southeastern Europe, while the rest are native to the temperate Far East. First brought to America over three hundred years ago by French Jesuit missionaries, there are ancient specimens on Michigan's Mackinac Islands with trunks nearly two feet in diameter.

Lilacs are excellent alone or in hedges. Deep green glossy heart-shaped foliage looks good from spring through fall. Intensely fragrant blooms in May over a period of several weeks.

As with roses and crabapples, we vary our list each year to give you a wide selection over the course of time. If you have suggestions for cultivars you'd like us to offer, please let us know. The Lyle Littlefield Garden remains the best place in Maine to see lilacs in bloom. If words can't do it for you, go up to Orono next May. Many of the varieties we sell are there. (See #**4212** for Tree Lilac.)

S. vulgaris **Common Purple Lilac** 12-15' x same. A mass of medium-light purple blooms every year. A magnificent New England sight for nearly 400 years. When a nursery friend looked out my living room window and thought I had some fancy new cultivar, I chuckled, "Nope, just the good old common purple." Never a disappointment. Suckers freely, the best lilac for a spreading hedge. Z2. **ME Grown.** (8-24" beefy transplants)

4790 Common Purple Lilac, $9.50

S. v. **Arch McKean** 7x8' 'Agincourt Beauty' x 'Rochester', John Fiala introduction, Falconskeape, Ohio, 1984. Large single showy upright magenta blooms. My notes from the Arnold Arboretum about this lilac four years ago say "dark purple." This spring I'm more inclined to call it reddish purple or magenta. Definitely darker than most lilacs and would contrast wonderfully with any of the white and lavender cultivars, but up against an eggplant it would look a little washed out. Non-suckering. Bred by renowned lilac and crabapple breeder, researcher and author Father John L. Fiala. Z3. **ME Grown.** (2-3' plants)

4795 Arch McKean Lilac, $12.00

S. v. **'President Grevy'** 12-15' x 12' French hybrid. Who was President Grevy? Covered with lavender—almost pink—buds followed by fragrant double light violet blue-tinted flowers on very large (2½-5½") open pyramidal panicles. Columnar vase-shaped medium-thick growing habit. Non-suckering. Blooms a little later than another "blue" lilac, President Lincoln. Not as blue as Lincoln but very nice. Dark green foliage. Z3. **ME Grown.** (2-3' plants)

4856 President Grevy Lilac, $12.00

S.* x *hyacinthiflora **'Asessippi'** 8x10' (*S. vulgaris* x *S. oblata dilatata*) Frank L. Skinner introduction, Dropmore, Manitoba, Canada, 1932. If we did a whole section of Roger Luce's favorite lilacs, Asessippi would certainly be one of them. I've grown to love the early-flowering suckering wide-spreading shrub. Although it is generally described as faint light purple, I see a lot of bright pink in the prolific medium-sized panicles. Flowers all through the shrub with heavy blooming even on the lower branches. The panicles don't hang, rather they reach out from the foliage. A beautiful plant. Asessippi is one of several hybrids developed by Dr. Skinner using the pollen of *S. oblata dilatata*, the Early Blooming or Broadleaf Lilac of eastern Asia. We are also offering Excel and Mount Baker from that same famous breeding program in prairie Canada. Z3. **ME Grown.** (2-3' plants)

4880 Asessippi Lilac, $12.00

S.* x *hyacinthiflora **'Excel'** 8x10' (*S. vulgaris x S. oblata dilatata*) Frank L. Skinner introduction, Dropmore, Manitoba, Canada, 1935. Not to be confused with the computer program of the same name, which it predates by 50 years. Early-blooming lavender single flowers that lilac expert John Fiala called "very good to fine." Excel's lavender also includes pink tones, although not the with same rosiness as Asessippi. Rather, Excel is a soft light lavender leaning towards violet. Rounded form, full flowering and fragrant. Extremely hardy. Z3. **ME Grown.** (2-3' plants)

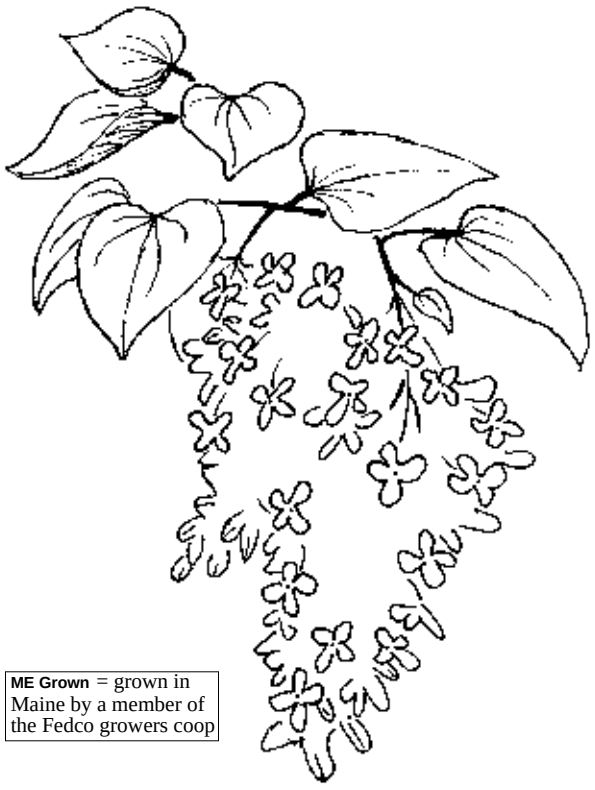
4881 Excel Lilac, $12.00

S.* x *hyacinthiflora **'Mount Baker'** 8x10' (*S. vulgaris* x *S. oblata dilatata*) Dr. Frank L. Skinner introduction, Dropmore, Manitoba, Canada, 1961. Prolific single heavily fragrant lovely showy white blooms. Another of Roger Luce's favorites. As we observed it in bloom he simply said, "lovely white." Large shrub blooms about two weeks before most other lilacs. Purplish fall foliage. Extremely hardy. Z2-3. **ME Grown.** (2-3' plants)

4883 Mount Baker Lilac, $12.00

S. x tribrida **'Minuet' Lilac** *S. josiflexa* 6-8 x 4-6' 'Redwine' x *S. Prestoniae* 'Donald Wyman', William Cumming introduction, Morden Arboretum, Manitoba, Canada, 1972. Late season blooming, low-growing compact dwarf lilac with rosy clear pink blooms. Unlike the typical heart-shaped lilac foliage, Minuets leaves are oval and dark green. Highly disease and pest resistant. Z2. **ME Grown.** (2-3' plants)

4894 Minuet Lilac, $12.00



ME Grown = grown in Maine by a member of the Fedco growers coop

Lilacs are adaptable, easy to grow and practically maintenance-free. Plant them in a well-drained location in moderately rich soil. Sandy gravelly loam is perfect. They prefer sun at least two-thirds of the day. We suggest planting them with a shovelful of lime. Add another shovelful of lime every three years. A yearly mulch of manure or compost will encourage spectacular annual blooming.

How to Prune Lilacs

As the plant matures, prune off a quarter of the new suckers and oldest growth, a few main stems each year, and keep them trimmed down to an attractive height. No need to cut off spent flowers, but for best appearance remove flower heads as soon as through blooming, using care not to injure closest pair of leafy branches.

***Salix gracilistyla* 'Melanostachys' Black Pussy Willow** 6-10' x same. A very attractive fast-growing plant for wetland situations. Deep purple-black male catkins in early spring, suitable for the dining table or kitchen windowsill. The rather short foliage opens orange and then turns a deep green. Stems assume a rich purple-black color in winter. Very nice dark colors all year. Winner of Royal Horticulture Society Award of Garden Merit. Prune in summer or fall. Full sun, prefers moist soils, pH adaptable but does not like shallow chalky soils. Native to eastern Asia. Z4. **ME Grown.** (8-12" beefy transplants)

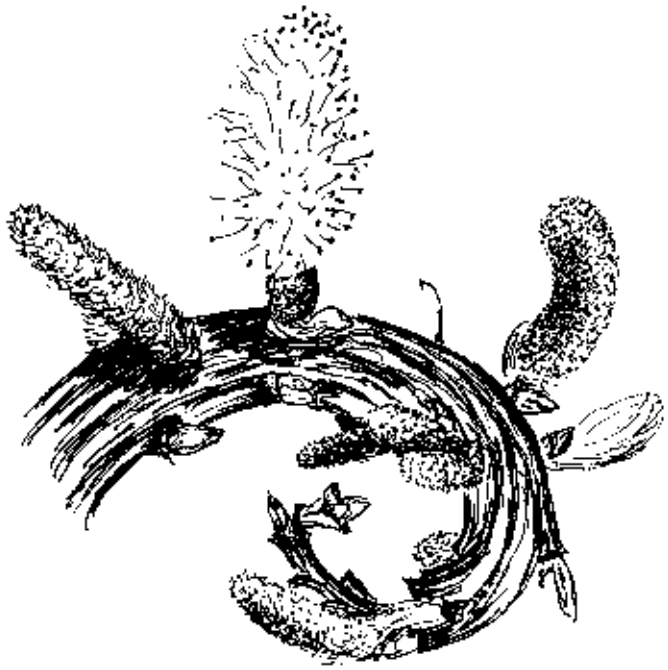
4738 Black Pussy willow, $10.00

***S. purpurea* 'Gracilis' (nana) Blue Leaf Arctic Willow** 3-5 x 3-6' Selection of purple osier willow. Medium-sized spreading rounded shrub with small narrow blue foliage (actually greenish above and blue beneath) and delicately thin long red or green stems. This is the "angel hair" of willows. The graceful thin stems sucker and layer and form a thick and highly attractive ornamental mass. Long cultivated and used for fine-textured basket making. Excellent bank or hedge plant, especially in wet areas but also quite suitable for a highly visible location. If it gets too overgrown, every couple of years cut it to the ground and it'll come right back. Native from Europe to North Africa to Japan. Z3. **ME Grown.** (1-2' transplants)

4740 Blue Leaf Arctic Willow, $10.00

***S. sachalinensis* 'Sekka' Japanese Fantail Willow** 10-15' x same or wider. Male selection, before 1700, Japan. Large wide dense spreading somewhat disheveled shrub with highly ornamental curled and flattened branches. Not wiggly or loopy like the contorted willows or the Harry Lauder's Walking Stick. Rather these branches are flattened and bundled (facinated) and often curled near the branch tip like the neck of a violin. Reddish-golden surreal branches are often used in flower arrangements. Covered with yellow-stamened catkins in spring. A perfect choice for an attractive impenetrable hedge or low windbreak. Glossy green summer foliage turns yellow in the fall. Highly adaptable. You can grow it anywhere. Would probably like it wet, but there is a massive hedge in Unity at MOFGA's Common Ground on the driest soil known to man. Native of Japan. Z4. **ME Grown.** (16-24' transplants)

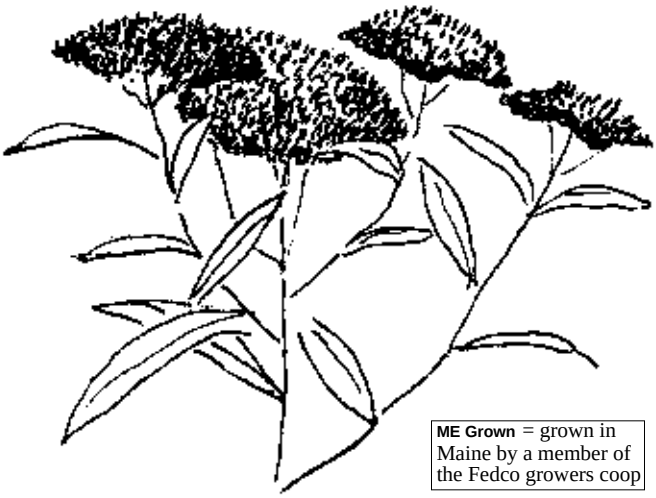
4742 Japanese Fantail Willow, $10.00



***Spiræa* Spirea** includes nearly 100 species of deciduous shrubs native to the northern hemisphere, all with profuse and often very showy small white, pink or red flowers, arranged in flat or round clusters or in pyramidal spikes. Varying in form and size, spireas are very adaptable, thriving in most soils with a full to partially sunny exposure and average moisture. Two well-known natives are Meadowsweet (*S. latifolia*) and Hardhack (*S. tomentosa*). Spring-flowering species bloom on last season's growth. Prune some of the growth in early spring to increase the flower cluster size. The summer-flowering species bloom on this year's growth and usually require no pruning at all. Each year we offer a few of our favorite spireas, varying our selection annually.

***S. fritschiana* Spirea** 2-3 x 4-6' Compact mounded shrub with profuse 2-4" flat-topped pink-white inflorescences that bloom in late spring, a month or so before Shirobana. Glossy dark green foliage turns dull maroon-purple in fall. Adaptable, extremely hardy and easy to grow. As John Sabuco put it in *The Best of the Hardiest*, "Just plant it and forget it." Native to eastern Asia. Z3. **ME Grown.** (18-24" translants)

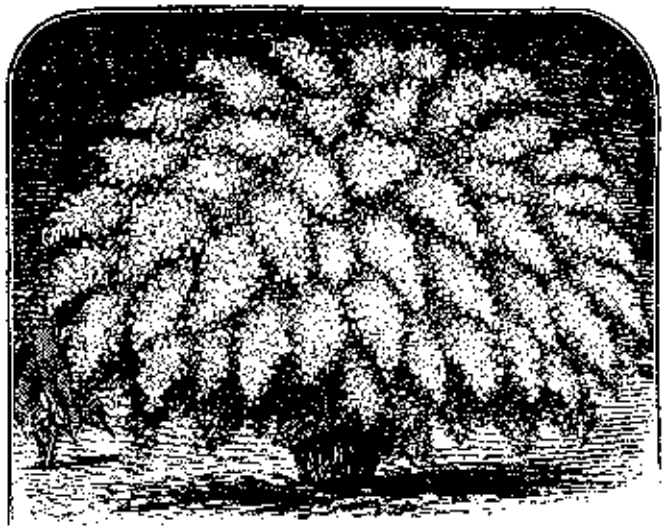
4760 Fritschiana Spirea, $9.00



ME Grown = grown in Maine by a member of the Fedco growers coop

***S. japonica* 'Shirobana' Spirea** 3-4' x same. Fast-growing mounded shrub. Flat-topped corymbs of tiny deep-rose, pink, and white flowers on the same plant all at once in late spring and early summer. The first time it blooms you won't believe it. Some recurrent blooming all summer. Lustrous deep green foliage. Best as a specimen or as a border. Prefers full sun and well-drained garden soil. Native of Japan. Z4. **ME Grown.** (18-24" translants)

4763 Shirobana Spirea, $9.00



***S.* x *vanhouttei* Vanhoutte Spirea** 5-7 x 10-12' (*S. trilobata* x *S. cantoniensis*) A spectacular fountain of pure white flowers in May on long arching branches that will reach up and out and then drape to the ground. Each dense corymb is like a little bridal bouquet. The epitome of the vase-shaped shrub and for many, the only real Spirea. Dark blue-green foliage. Orange-red fall color. Not a plant for a small space. Soil adaptable. Extremely rugged. Z3. (1-2' transplants)

4770 Vanhoutte Spirea, $9.00

4790-4894 ***Syringa* Lilacs** on page 42.

***Tamarix ramosissima* 'Summer Glow' Tamarisk** 10-15' x 20'. A zany ragged unkempt vase-shaped multi-trunked curiosity. Only 2 feet wide at the base but spreading at the top to nearly 20 feet. Soft pastel green foliage, each branch plumed with asparagus-like ferns topped with dense racemes of small pink flowers, about 50 per plume. During the extended 4-6 week midsummer bloom the spent flowers turn a soft muted orange. The overall effect is soft and quite lovely, a delightful combintation of muted orange, pink and green. All the while the entire shrub is covered with a mass of foraging bees. This is definitely a plant with a sense of humor. Summer Glow has a darker pink bloom than the straight species. Full sun, acid well-drained low fertility soil—even sand. A good choice for that beach home by the bay. Highly salt tolerant. Z2. (1-2' plants)

4915 Summer Glow Tamarisk, $8.00

***Viburnum lantana* x *V. rhytidophyllum* 'Emerald Triumph' Viburnum** 5-6' x same. U Minn Landscape Arboretum. A fast-growing upright slightly spreading shrub with a soft magical appearance and uniquely fragrant creamy-white flat-topped flowers. Blooms first in late spring and then blooms again later in the summer. When I visited grower Logan Johnston to see 'Emerald Triumph', his comment was, "The smell is worth the price of admission—nothing like it." Furry foliage and soft pastel-colored pubescent stems. Considered an excellent source of butterfly and bee forage. The birds will clean up the black fruit in the fall. Excellent in groupings or as a specimen. Sun or partial shade. Prefers decent well-drained soils but can handle dry conditions better than other Viburnums. Easy to transplant. No serious pests or disease. Parents native to China. Z4. **ME Grown.** (20-24" plants)

4943 Emerald Triumph Viburnum, $9.00

***V. sieboldii* 'Seneca' Viburnum** 12-14' x same. Resulted from a self-pollination of *V. sieboldii*. U.S. National. Arboretum introduction. Large shrub with very long simple elliptic electric-lime-green foliage. Absolutely wild color. Massive creamy-white flowers bloom in May-June followed by blood-red fruit in August that persists for up to 3 months. Full sun to partial shade. Prefers moist well-drained soils. Needs sufficient moisture as leaf scorch will develop under dry conditions. pH adaptable. Native to Japan. Z4. **ME Grown.** (8-12" beefy transplants)

4964 Seneca Siebold Viburnum, $10.00

***Weigela florida* Old Fashioned Weigela** Every spring I look forward to my neighbor's old fashioned weigela, flowering at the base of their enormous spruce tree right by the side of the road. It's as reliable as the mosquitoes and a lot more welcome! Compact dense rounded slightly vase-shaped shrub that may arch to the ground. Deep green foliage and 1" tubular funnel-shaped flowers that vary from pink to red to purple depending on the variety. Blooms for a month in late spring and early summer. Excellent in borders and in groups—or under spruce trees. The more sun, the more bloom. Prefers it well-drained, but thrives in most soil conditions, city or country. Native to eastern Asia. Zone 4 maybe Zone 3.

This year our offerings are from the Canadian Ottawa Experiment Station's Dance Series, some of the best of the many new varieties that have been selected in recent years. (8-12" beefy transplants)

***W. f.* 'Rumba' Weigela** 3x3' Compact rounded form. Ruffle-edged foliage opens an intense florescent green and then darkens to deeper, but no less intense, green finely edged with pink. Quite the nice foliage. Purplish-red flowers bloom all summer. **ME Grown.**

4975 Rumba Weigela, $10.00

***W. f.* 'Samba' Weigela** 3x3' Rumba x Eva Rathke. Soft copper-green foliage fading to a purple edge. Dark pink flowers with yellow throats. **ME Grown.**

4977 Samba Weigela, $10.00

***W. f.* 'Tango' Weigela** 2x2½' Complex cross. Purple- and yellow-veined new foliage turns dark burgundy with maturity. Smaller plant than Rumba and Samba. Purplish-pink flowers. **ME Grown.**

4979 Tango Weigela, $10.00

***Wisteria macrostachya* 'Aunt Dee' Wisteria** up to 50' (Species also called **Kentucky Wisteria**.) Magnificent twining vine with pinnate leaves for pillars, trellises, arbors, walls, even trees. Long 12" racemes of lilac-purple lightly fragrant flowers in late spring or early summer look almost like bunches of lavender grapes hanging from an arbor. Bean-like smooth green seed pods to 4" long. Prefers full sun in moderately fertile, well-drained soil. May need protection in Zone 4 but has even been known to flower in Zone 3. Native of southeastern U.S. (2-yr. medium vines) **ME Grown.**

4985 Aunt Dee Wisteria, $9.00

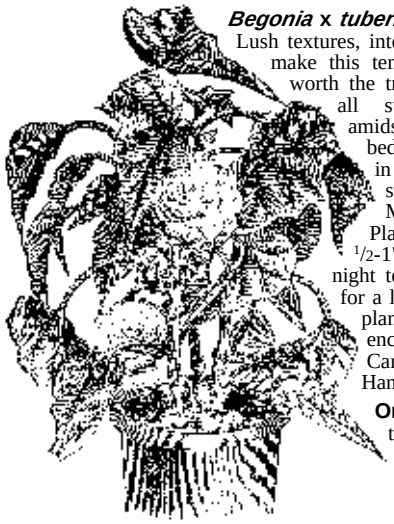
Tender Summer Bulbs are like fall-planted bulbs in that they give you an impressive display for comparatively little effort. Bulbs, corms and tubers store their energy which needs only some earth, moisture and sun to be released. They are not hardy in our climate. Energetic people lift and store them over the winter (details in the sidebar); the rest of us treat them as annuals. Each selection is offered in three different quantities; note the different item number for each package size.

Acidanthera murielæ **Fragrant Gladiolus** or **Ethiopian Gladiolus** produces sword-like foliage topped by wonderfully scented star-shaped 2" white flowers with mahogany-purple centers on arching stems. Useful as a garden or cutflower. 24" tall. Culture like gladiolus.

***6001**: 10/$2.65;*
***6002**: 20/$4.60;*
***6003**: 50/$10.80*

Anemone coronaria **De Caen mix Anemone** or **Windflower** Charming single flowers 1-3" wide are dark purple-blue, red, rose or white and appear in early summer. Good for borders, containers and for cutting. 8-10" tall. Soak knobby tubers in water 24 hours before early-spring planting 1-2" deep, 4-8" apart. Anemones enjoy full sun and light sandy soil but must be kept moist during the growing season.

***6011**: 10/$2.80;*
***6012**: 20/$4.80;*
***6013**: 50/$10.90*



Begonia* x *tuberhybrida **Tuberous Begonia** Lush textures, intense colors and a tropical aura make this tender temperamental plant well worth the trouble. Velvety flowers bloom all summer, drooping languidly amidst red-tinted foliage. Excellent bedding or container plants. Best in a cool spot with lots of indirect sunlight and air circulation. Moist but not soggy fertile soil. Plant outside, concave side up, 1/2-1" deep and 12-15" apart when night temperatures rise above 50˚ or, for a longer season, start indoors and plant out later. Pinch back to encourage more blooms. The Camellia is Multiflora type and the Hanging is, of course, pendulous.

Orange Double Camellia 12" tall. 2-2 1/4" tubers.
***6021**: 2/$3.25;*
***6022**: 4/$5.50;*
***6023**: 6/$7.50*

Scarlet Double Camellia 12" tall. 2-2 1/4" tubers.
***6031**: 2/$3.25;* ***6032**: 4/$5.50;* ***6033**: 6/$7.50*

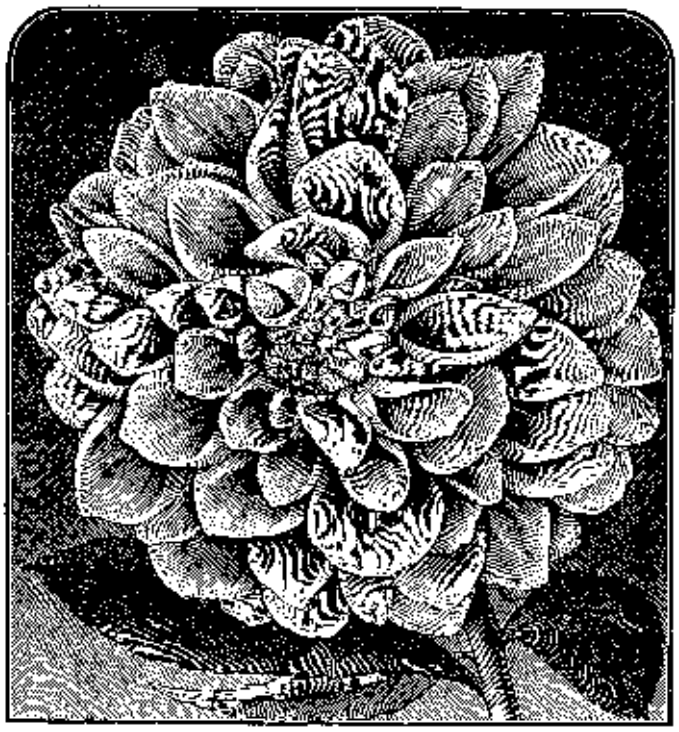
White Double Camellia 12" tall. 2-2 1/4" tubers.
***6041**: 2/$3.25;* ***6042**: 4/$5.50;* ***6043**: 6/$7.50*

Scarlet Hanging Basket 2-3' long. 1 1/2-2" tubers.
***6051**: 2/$3.00;* ***6052**: 4/$5.20;* ***6053**: 6/$7.25*

White Hanging Basket 2-3' long. 1 1/2-2" tubers.
***6061**: 2/$3.00;* ***6062**: 4/$5.20;* ***6063**: 6/$7.25*

Crocosmia* x *crocosmiiflora **'Lucifer'** makes a glowing garden flower or long-lasting cutflower. Midsummer sprays of bright red flowers opening from bottom to top on curving flower stalks look like bursts of flame above their gladiolus-like foliage. "Lucifer" means "light-bearing" and refers to the blossoms looking like lighted matches. Grows well in pots. 24-36" tall. Plant 3" deep, 3" apart in moist, well-drained soil.

***6071**: 5/$3.50;*
***6072**: 15/$9.75;*
***6073**: 30/$19.00*



Dahlia Bushy bedding plant and cutflower producer blooms from midsummer until frost. Native to hot parts of the Americas and first developed as a food crop, ornamental dahlias are descended from years of breeding and hybridizing *D. pinnata* and *D. juarezi*. Earl Waterman grew all this year's stock at Roadtown Dahlia Patch in Shutesbury, MA. These are large tubers.

Dahlia **Dazzle** Earl says, "This flower is a head-turner. If you like BIG, this is BIG, full foot above anything else." Yellow-orange 6-8" flowers on sturdy 6' plants that rarely tip over. One or two flowers work as part of a bouquet. You won't want to use many more unless you are making an arrangement for a space like the lobby of the Metropolitan Museum.

***6081**: 1/$2.75;*
***6082**: 3/$7.20;*
***6083**: 6/$13.30*

D. **Peter's Purple** Tall 4' plants with 6" purple flowers, good for specimens or cuts. "Spectacular, impressive eye-bender," says our modest grower.

***6091**: 1/$2.75;* ***6092**: 3/$7.20;* ***6093**: 6/$13.20*

D. **Sunburst** Earl again: "If you can plant one plant—plant this." Flowers are a red-yellow combination. Under good conditions, red dominates; in drought, it's yellow tinged with red. 3-4" flowers good for drying and go well with almost anything. 36-42" tall plant.

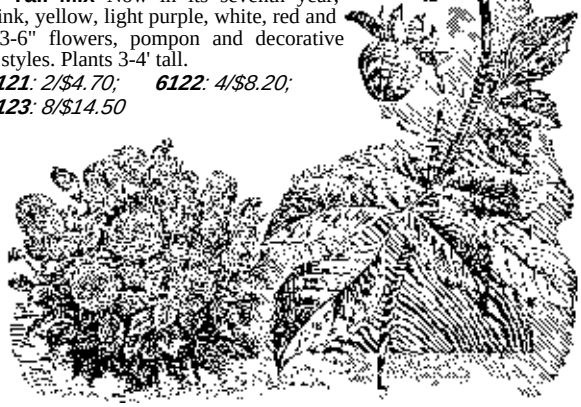
***6101**: 1/$2.75;*
***6102**: 3/$7.20;*
***6103**: 6/$13.50*

D. **Earl's Cactus Mix** Early bloomers, excellent cut flowers. Cactus-style blooms are same size, 3-4", and shape, but colors are maroon, purple and white. 2-3' tall.

***6111**: 2/$4.70;* ***6112**: 4/$8.20;*
***6113**: 8/$14.60*

D. **Earl's Tall Mix** Now in its seventh year, includes pink, yellow, light purple, white, red and dark red 3-6" flowers, pompon and decorative (standard) styles. Plants 3-4' tall.

***6121**: 2/$4.70;* ***6122**: 4/$8.20;*
***6123**: 8/$14.50*



Eucomis bicolor **Pineapple Lily** Novel cultivar whose common name comes from its cylindrical arrangement of flowers topped by green leafy bracts sprouting from the top of the stalk. Shiny strap-like leaves stand up from a rosette from which a thick erect maroon-flecked stalk emerges and bears an unearthly flower cluster. Numerous pendant star-shaped blossoms along 6" of the stalk are each greenish yellow outlined in maroon-purple. Bracts above the flowers evoke a pineapple's foliage. Plant bulbs 6" deep in fertile well-drained soil, full sun. Blooms 80-100 days after planting: late summer. Excellent for containers. 12-15" tall. Native to southern Africa. Bulbs are 14 cm and up.

6131*: 1/$2.90;*
6132*: 3/$6.25;*
6133*: 6/$11.75*

Gladiolus **Sword Lily** is a showy summer bloomer and excels as a cut-flower. Each 36" tall stalk is covered with 10 or more open funnel-shaped flowers that bloom from bottom to top. Named for the their sword-like leaves; a gladiolus was a small sword in ancient Rome. Gladiolus bulbs are $1^1/_2$" and up.

G. **'Black Jack'** dark maroon.
6141*: 10/$2.85;* ***6142****: 20/$4.90;* ***6143****: 50/$11.50*

G. 'Blue Frost' violet-blue with lavender accents.
6151*: 10/$2.85;* ***6152****: 20/$4.90;* ***6153****: 50/$11.50*

G. **'Jester'** yellow with a red-orange throat.
6161*: 10/$2.85;*
6162*: 20/$4.90;*
6163*: 50/$11.50*

G. **'Oscar'** intense solid crimson.
6171*: 10/$2.85;*
6172*: 20/$4.90;*
6173*: 50/$11.50*

G. **'Praha'** apricot-salmon with yellow throat.
6181*: 10/$2.85;*
6182*: 20/$4.90;*
6183*: 50/$11.50*

G. **'Priscilla'** lavender-rose edge, white center.
6191*: 10/$2.85;* ***6192****: 20/$4.90;* ***6193****: 50/$11.50*

G. **'White Friendship'** ruffled snow-white.
6201*: 10/$2.85;*
6202*: 20/$4.90;*
6203*: 50/$11.50*

Large-Flowering Glad Mix
6211*: 10/$2.50;*
6212*: 20/$4.50;*
6213*: 50/$10.50*

Nanus Glad Mix miniature, mixed colors, many bicolors, 24" tall. Some suppliers offer these as Hardy Glads, said to be hardy in Zone 5. We haven't tested that yet. Let us know.
6221*: 10/$4.20;*
6222*: 20/$7.20;*
6223*: 50/$17.00*

Tender Summer Bulbs
In our climate, these tender spring-planted summer-blooming bulbs, corms and tubers will not survive the winter outdoors. You may dig them up in the fall after foliage dies, dry them and gently brush off soil and debris, store somewhere dark and cool (40-50˚) for the winter in a medium like dry peat or sawdust, and then replant in spring. Or grow them in pots and relocate as the weather dictates. Or treat them as annuals and compost them at the end of the season.

Dahlia Needs 3-4 hours per day of direct sun, tolerant of full sun to light shade. Plant 3-4" deep, 12-24" apart. Conventional wisdom says to plant after danger of frost is past, but our grower in Massachusetts plants his the same time as his peas, and stresses the importance of early planting, saying they recover in the rare event that the first foliage is killed by frost. Dahlias often need staking, but close plantings can support each other. Dahlia blooms are susceptible to insect damage, especially in the bud stage. Tarnish plant bugs, leaf hoppers and thrips are all suspect. Think out a control program ahead of time. Keeping the flowers picked keeps some pests down.

Gladiolus Each stalk blooms for about a week, about 8 weeks after planting. Stagger plantings for flowers from summer to frost. Cut when 2-3 flowers have opened, taking care to spare the leaves which feed the developing corm. Plant corms 4-6" deep and 6" apart after the last spring frost. Hilling or staking may be needed if their sword-shaped foliage and 3-4' flower spikes get top heavy. Dig up the corms after the tops have died, discard the old one, clean the new one, dry, and store loose (no peat) in a cool dry place.

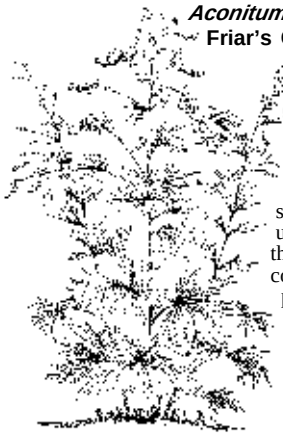
Thrips are a problem for glads, and infestations—indicated by yellowing and spotted foliage—are aggravated by water stress. Be prepared lest they devastate your plants and prevent flowering. Research a control program acceptable to you (possibilities include insecticidal soap, garlic, pyrethrum, or rotenone), have it on hand, and use it at the first sign of infestation.

Tigridia pavonia **Tiger Flower Mix** Neat looking triangular 5-6" flowers consist of three big petals, flat in vivid solid colors on the outer half, which join three smaller petals to form a cup-shaped center. The inside of the cup has dark mottled markings resembling those of a jaguar, the "tiger" of the name. Plant in full sun, very well-drained soil, keep moist. Glad-type foliage about 20" tall, blooms in August on stalks 2-3' tall.

6231*: 5/$1.80;*
6232*: 15/$3.70;*
6233*: 30/$6.50*

Herbaceous Perennial Plants

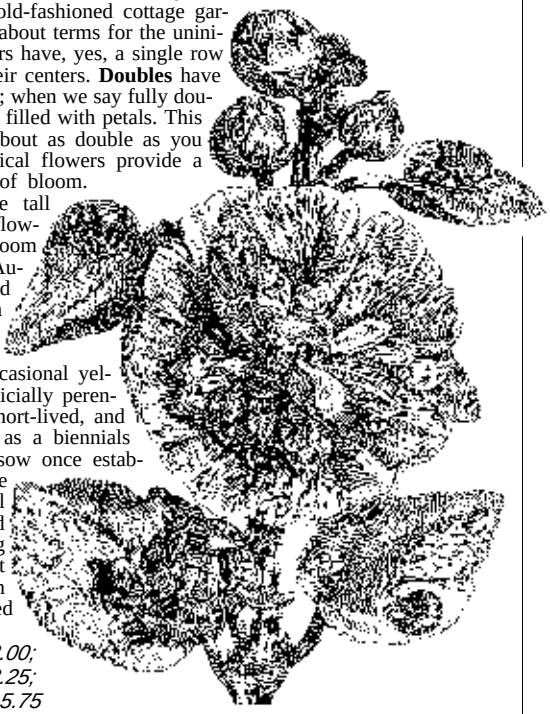
Most of the perennial plants we offer are hardy at least into Zone 4. USDA hardiness zone (chart on page 3) follows each description. The list is alphabetized by botanical names, in italics, followed by common names. Each selection is offered in three different quantities; note the different item number for each package size.



Aconitum napellus **English Monkshood** or **Friar's Cap** produces dense showy spikes of deep violet-blue helmet-shaped flowers above elegant palmate foliage in late summer. Plant in a partially shaded, cool and moist location for longest-lasting flowers. An excellent cutflower—cut when 1/3 to 1/2 the spike is in bloom. Grand delphinium-style blooms rarely need staking. I love watching bumble bees climb under the hood and completely disappear into the flowers then clamber back out again covered with pollen. The entire plant is poisonous; wash your hands after handling or cutting. 36-40" tall. Plant 15-20" apart in moist soil. Z3.

6241*: 1/$2.90;*
6242*: 3/$7.50;*
6243*: 6/$13.50*

Alcea rosea **'Chater's Double' Hollyhock Mix** is associated with old-fashioned cottage gardens. A few words about terms for the uninitiated: **Single** flowers have, yes, a single row of petals around their centers. **Doubles** have *many* rows of petals; when we say fully double we mean totally filled with petals. This year's offering is about as double as you can get: hemispherical flowers provide a spectacular excess of bloom. Hollyhocks produce tall spires of big round flowers for extended bloom through July and August. Their mixed colors range from white through the pinks into rose and maroon with an occasional yellow or salmon. Officially perennial, they can be short-lived, and are best cultivated as a biennials which readily self-sow once established in favorable conditions. Like full sun. 4-6' tall, wind protection or staking is essential. Plant 12-18" apart in moist well-drained soil. Z3.



6251*: 1/$3.00;*
6252*: 3/$8.25;*
6253*: 6/$15.75*

Bare-Root Perennial Stock

Treat bare-root perennials like tender annuals for their first growing season, when they typically focus on root growth. Once established, usually in the second year, they are vigorous and floriferous.

When you receive your order, open the bags and check the stock immediately. Roots and crowns should be firm and pliable, not soft or brittle. If they are slightly dry, add a little water or, if they are going to be potted up soon, soak the roots. Generally, a little surface mold is harmless and will not affect the plant's future performance. If you cannot pot them up immediately, store them in a cool (35-40˚) location for a short time.

Pot up the roots in well-drained potting mix. Most plants need a deep 6" pot or a 1-gallon container. Avoid coiling the roots in the bottom of undersized containers. Grow newly potted perennials for a few weeks in a protected location in indirect light at 50-60˚ and keep them from freezing. Wet and/or cold conditions for an extended period may cause rotting. Begin feeding when new growth appears. Keep dry fertilizers away from plant crowns. Animal manures should be used with caution as they can promote fungal and bacterial diseases.

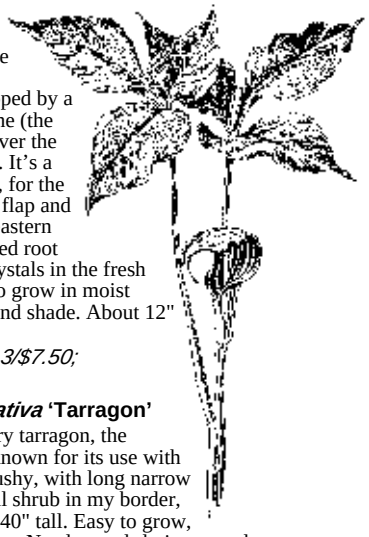
Transplant out after danger of frost, once they show some top growth. Dig a hole about twice the size of the pot, loosening the surrounding soil and adding compost or fertilizers as necessary. Generally, plant the top of the crown just below ground level, less than an inch from the surface of the soil.

Nearly all perennials appreciate a fall mulch and a sidedressing of compost or leaf mold in the spring.

Allium senescens **'Glaucum' Curly Chive** Low-growing decorative allium blooms in late summer, when many other plants are fading, with round blossom clusters that open dusky mauve pink and mature to pinkish-lavender, on upright stems 8-12" above the foliage. But my favorite aspect is its short swirling grey-green (glaucous) foliage which is attractive all summer but utterly enticing in the cold wet weather of early spring when it shines like curled hair lying on the ground. Clumps multiply gradually, easy to grow. Plant 6-8" apart in full sun to part shade, average-good soil. Z3. **ME Grown.**

6261*: 1/$3.25;* ***6262****: 3/$8.50;* ***6263****: 6/$16.30*

Arisaema triphyllum **Jack-in-the-Pulpit** In midspring one or two compound leaves emerge close to the ground, each with three leaflets framing an upright stem topped by a tannish-purple 3" long cuplike spathe (the pulpit) which contains and arches over the erect greenish-yellow spadix (Jack). It's a great pleasure, one I still remember, for the two- or three-year-old set to lift the flap and see Jack. Wildflower native to the eastern U.S. Native Americans used the dried root medicinally, but calcium oxalate crystals in the fresh plant are intensely irritating. Easy to grow in moist woodsy soil with plenty of humus and shade. About 12" tall. Nursery propagated. Z4.



6271*: 1/$2.90;* ***6272****: 3/$7.50;*
6273*: 6/$13.75*

Artemisia dracunculus **var.** ***sativa*** **'Tarragon' French Tarragon** really is culinary tarragon, the flavoring with a hint of anise well known for its use with vinegar, salads, poultry and fish. Bushy, with long narrow grey-green leaves, looks like a small shrub in my border, where it thrives despite neglect. 18-40" tall. Easy to grow, especially in poor dry soil, full sun. Needs good drainage and some use a winter mulch. Z4.

6281*: 1/$3.50;* ***6282****: 3/$9.00;* ***6283****: 6/$17.00*

Aster **Starwort** or **Frost Flower** are familiar summer and fall wildflowers throughout the nation. These varieties are selected for outstanding color and form but are still robust and easy to grow. Flowers provide great displays in fall, attract butterflies and beneficial insects, and last long, long in the vase. Deer don't usually eat them. Plant singly, group in the border, or naturalize in meadows or on banks. Cut back slightly in early-mid June to induce an abundance of 1 1/2-2" rayed blooms from late August into October. Asters are at their peak when most plants have faded. Plant 12-18" apart in light moist humusy soil in full sun with good air circulation. Z4.

A. dumosis **'Wood's Blue'** Light sky-blue flowers with yellow centers. Compact habit, good mildew resistance. 8-12" tall.

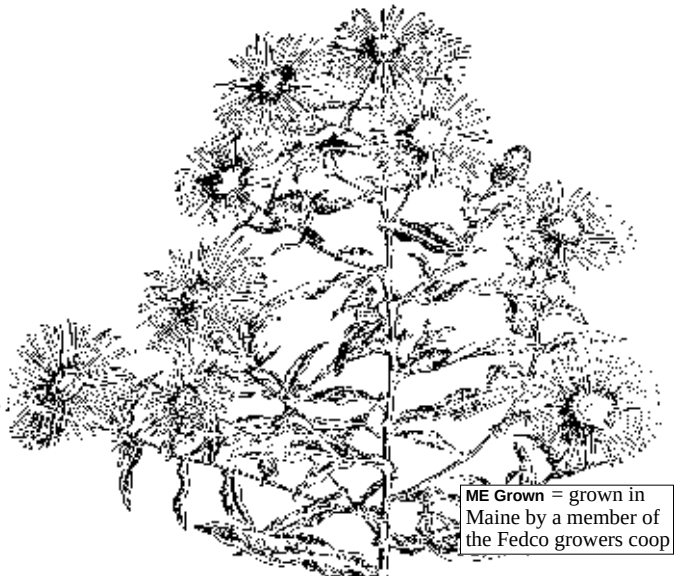
6291*: 1/$3.50;* ***6292****: 3/$9.00;* ***6293****: 6/$16.90*

A. novae-angliae **'Alma Potschke'** Surprising wonderful intense salmon-rose. One of my favorites. 30-36" tall.

6301*: 1/$3.50;* ***6302****: 3/$9.00;* ***6303****: 6/$17.50*

A. novae-angliae **'Purple Dome'** Deep purple flowers with an excellent compact habit. Grower Anne Hallee described them as "loaded with flowers. Like fireworks in the fall!" 18". **ME Grown.**

6311*: 1/$3.25;* ***6312****: 3/$8.00;* ***6313****: 6/$15.25*



ME Grown = grown in Maine by a member of the Fedco growers coop

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***Astilbe* Feather Flower, Goatsbeard** or **False Spirea** lends a novel touch to the border and is easy to grow, hardy and long-lived. Long-lasting plumy feathery flowers are good for drying and provide a welcome contrast to more ordinary petaled blossoms. Elegant fern-like foliage forms an attractive clump all season and comes in a wide range of sizes and shades. Convention holds Astilbe to be a partial-shade plant that absolutely requires a moist humusy acid soil when grown in full sun. That's true in warmer areas, but in central Maine it seems to like full sun in a wide range of conditions. Blooms July and August. Stock has 2-3 "eyes." Plant 12-18" apart and divide clumps every few years.

A. chinensis* 'Purple Candles'** Also called ***Purpurkerze. Purple-red narrow plumes, dark shiny bronze-green foliage, very late season, one of the tallest, 36-42".

***6321**: 1/$2.90;* ***6322**: 3/$7.50;* ***6323**: 6/$13.80*

***A. japonica* 'Peach Blossom'** Delicate peach-pink over medium-green foliage, early-mid season, 20-24" tall.

***6331**: 1/$2.90;* ***6332**: 3/$7.50;* ***6333**: 6/$13.90*

***A. simplicifolia* 'Hennie Graafland'** Glowing rose-pink flowers catch one's eye across the garden, described as "unnaturally bright." Tight clusters loosen after a while. Finely cut shiny small very dark bronze-green foliage "looks like a fern bed" after the spent blooms are cut. Mid-late season. 16" tall. Z4.

***6341**: 1/$2.90;* ***6342**: 3/$7.50;* ***6343**: 6/$13.80*

***Astrantia major* Masterwort** might derive its botanical name from *astra*, star, referring to its star-like flowers that form globular clusters from June into July. Flowers are an interesting combination of pink, tan and creamy white on long stems, several per stalk, excellent for cutting. Big tidy clumps of deeply cut dark green celery leaf-shaped foliage make very satisfactory additions to the border throughout the season. Prefers moist rich soil in sun to part shade, but manages in a wide range of conditions. Easy to grow, old-fashioned, try it for a problem spot in your border. Will self-sow a little when it's content. 24-36" tall. Plant 12-24" apart. Z4.

***6351**: 1/$2.90;* ***6352**: 3/$7.50;* ***6353**: 6/$14.00*

***Baptisia australis* False Indigo** or **Wild Indigo** makes a fine long-blooming specimen in the border or wild garden. Some people use it like a shrub on the lawn. Upright leguminous plant with grey-green stems and blue-green leaves. Indigo-blue flowers on arching 12" racemes in mid-late spring followed by fat black seed pods good in dried arrangements. Untroubled by pests or drought, tolerates poor soil. Starts small, no blooms for a couple of years, bushes out by third year. Becomes 3-5' tall, may need staking. Native to eastern U.S. So why is it named *australis*? Because that means 'southern'. ('From Australia' is *australiensis*.) The genus name, from *bapto* meaning 'dye', refers to Baptisia's occasional use as in indigo substitute. Plant 2-3' apart in deep rich soil. Flowers best in full sun, but tolerates shade. Z3.

***6361**: 1/$3.60;* ***6362**: 3/$9.20;* ***6363**: 6/$17.50*

***Convallaria majalis* Lily of the Valley** is a hardy bedding or border plant and an excellent ground cover, even for dry shade. Perennial favorite and a top-seller for all 18 years that we've listed it. Easy to grow under any conditions, prefers partial to full shade. Produces long stems of bell-shaped fragrant white flowers in late spring-early summer, followed by small orange berries. Intense fragrance and delicate shape add welcome notes to bouquets. Plant pips 2" deep, 3-5" apart in rich moist soil. 6-8" tall. Z2.

***6371**: 5/$3.00;*
***6372**: 10/$5.20;*
***6373**: 25/$12.10*

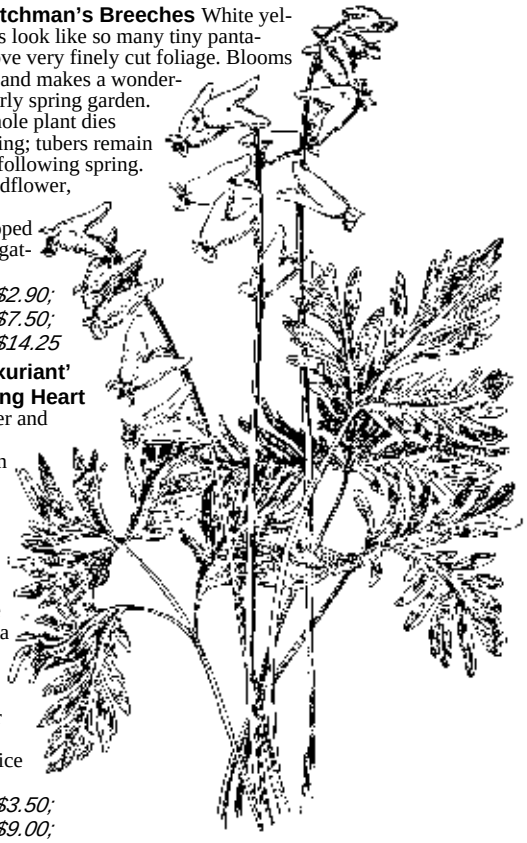
***Delphinium* 'Magic Fountains' Delphinium** is a popular variety for small gardens. No staking needed for these sturdy early summer 28-36" spikes densely covered in flowers. The Magic Fountain series is long-lived and easier to grow than the big delphiniums. Mix includes pink, white, lavender, lilac, sky blue and dark blue. Sidedress lightly early, mid and late spring for best show. Cut spent flowerstalks for fall rebloom. Plant 12-24" apart in highly fertile non-acid loam in full sun or light shade. Our plants this year are in 3" plugs. Z3.

***6381**: 1/$3.00;*
***6382**: 3/$8.25;*
***6383**: 6/$15.50*

***Dicentra* Bleeding Heart** Graceful racemes arch above and beside clumps of attractive cut foliage. Distinctively shaped flowers dangle in a row on each raceme like charms on a bracelet. Hardy long-lived plant when it gets rich moist soil and partial shade. Z3.

***D. cucularia* Dutchman's Breeches** White yellow-tipped flowers look like so many tiny pantaloons hanging above very finely cut foliage. Blooms with the daffodils and makes a wonderful accent in an early spring garden. An ephemeral: whole plant dies down after flowering; tubers remain dormant until the following spring. Native eastern wildflower, rescued from sites about to be developed and nursery propagated. 8-12" tall.

***6391**: 1/$2.90;*
***6392**: 3/$7.50;*
***6393**: 6/$14.25*



***D. formosa* 'Luxuriant' Western Bleeding Heart** Blooms all summer and tolerates heat and drought better than any other *Dicentra*. Cherry red flowers defy the elements as they dangle above lush finely-cut light green foliage which is pretty as a fern's. Excellent border plant with spreading habit, 12-15" tall. Lower prices than ever before on this choice cultivar.

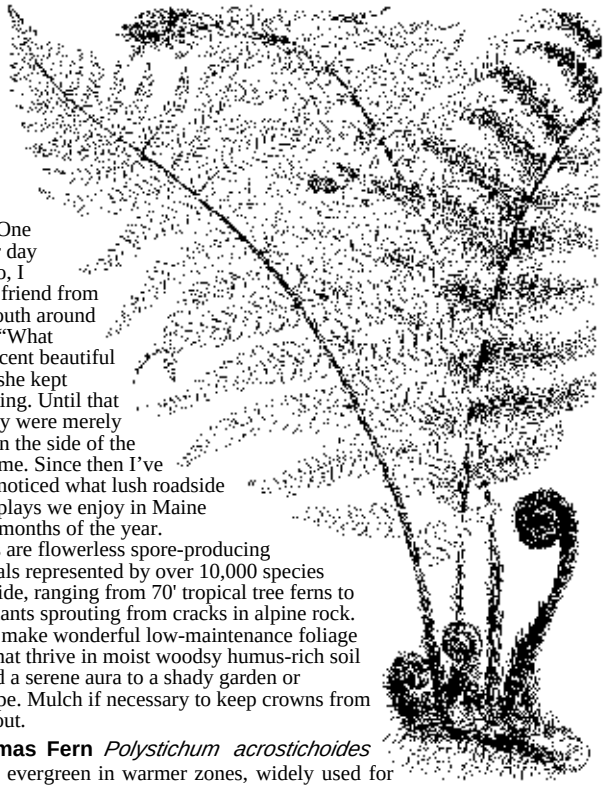
***6401**: 1/$3.50;*
***6402**: 3/$9.00;*
***6403**: 6/$17.50*

***D. spectabilis* Old-Fashioned Bleeding Heart** Pink heart-shaped flowers with white detail on this old garden favorite delight every spring. Blooms with late tulips and complements them well. Also useful for cutting. Prefers plenty of room to bush out. Mine surprised both me and its neighbors when it became over 6' wide in two years. I moved it last sping and it suffered no ill effects. Foliage may die back in summer heat. Plant 2-4" deep, 24" apart. 30-36" tall. Our stock has 2-3 eyes. Z3.

***6411**: 1/$3.00;*
***6412**: 3/$7.80;*
***6413**: 6/$14.00*

***Digitalis* x *mertonensis* Strawberry Foxglove** Pendulous 2½" bell-shaped copper-tinged strawberry-rose flowers with spotted throats dangle along 3-4' spires June till August. Good for cutting or border. Basal rosette of big velvety leaves. Large true-breeding tetraploid hybrid needs dividing every 3 years. Plant 24-36" apart in moist slightly acid soil in full sun to partial shade. Z4.

***6421**: 1/$3.50;*
***6422**: 3/$9.00;*
***6423**: 6/$17.25*



Ferns One summer day long ago, I drove a friend from down south around Maine. “What magnificent beautiful ferns!” she kept exclaiming. Until that day, they were merely plants on the side of the road to me. Since then I’ve always noticed what lush roadside fern displays we enjoy in Maine several months of the year.

Ferns are flowerless spore-producing perennials represented by over 10,000 species worldwide, ranging from 70' tropical tree ferns to teeny plants sprouting from cracks in alpine rock. Several make wonderful low-maintenance foliage plants that thrive in moist woodsy humus-rich soil and lend a serene aura to a shady garden or landscape. Mulch if necessary to keep crowns from drying out.

Christmas Fern *Polystichum acrostichoides* remains evergreen in warmer zones, widely used for Christmas cut greenery. Shuttlecock of fronds with ladder-like parallel leathery dark green leaves is partially evergreen in our climate and provides good fall interest and emerges in very early spring to combine well with woodland flowers. Moist acidic soil, light shade, tolerates sun with sufficient moisture. Plant 2-3' apart. 18-24" tall. Northeastern native. Z3.

***6431**: 1/$3.00; **6432**: 3/$7.00; **6433**: 6/$13.50*

Japanese Painted Fern *Athyrium niponicum* ‘Pictum’ is the most decorative fern I know and surprisingly rugged for such a fancy plant. The Perennial Plant Association’s Plant of the Year for 2004. Soft grey-green background with purplish wine-red stems and markings, accented by silvery-grey highlights. Needs partial shade, moist soil. Deciduous. 8-18" tall with spreading habit. Plant 10-12" apart. Z3.

***6441**: 1/$4.80; **6442**: 2/$8.20; **6443**: 3/$11.90*

Lady Fern *Athyrium filix-femina* tolerates more sun and drier soil than most ferns. Spreads easily from falling spores in moist soil. Works as a foundation planting on the shady sides of my house. Graceful bright green fronds are twice compound with very numerous leaflets resulting in a fine-textured classic fern appearance. Many variant forms, a few taller than 4' but most are under 2'. Z3.

***6451**: 1/$3.00; **6452**: 3/$7.00; **6453**: 6/$13.50*

Maidenhair Fern *Adiantum pedatum* Delicate whorled form makes it one of my favorite ferns. Polished black stems curve up and then droop toward the ground with more narrow black stems growing in arches from them. Tiny distinct ginkgo-like green leaves line every stem. I guessed maidenhair fern is named after maidenhair tree but customers have sent material that pertains to women’s hair. Thank you. I continue to seek definitive information on this topic. Plant 12" apart. Likes semi-shade or shade, moist soils. Native to eastern North America. Very hardy. Z2.

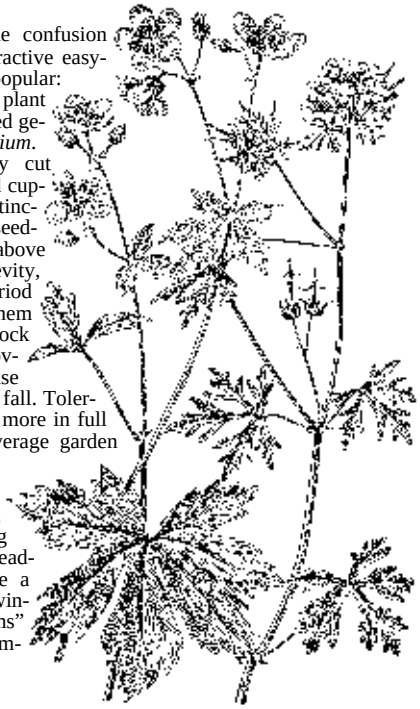
***6461**: 1/$3.50; **6462**: 3/$9.00; **6463**: 6/$16.50*

Ostrich Fern *Matteuccia struthiopteris* is a delicately textured bright green deciduous fern with a golden hue in the light. Frond tips curl like ostrich feathers. Likes open shade, woods and wet banks. Tolerates full sun in swampy areas. One of the largest hardy ferns, 3-7' tall, and spreads by underground runners, so give it room. Native to Europe, but well established and welcome in North America. Z2.

***6471**: 1/$3.50;*
***6472**: 3/$9.00;*
***6473**: 6/$16.50*

Royal Fern *Osmunda regalis* also attains giant proportions and, as one of the showiest garden ferns, makes a great focal point on a waterside or in a woodland. Soft and wavy deciduous lance-shaped light green fronds can reach 3' long. Sometimes called **Flowering Fern** because some of the fronds have brown spore cases on their tips which lend a decorative tassel-like appearance. Slow-growing plant gets to be 6' tall and over 9' wide in humus-rich moist-to-wet soil. Evolutionarily speaking, *Osmunda* is one of the oldest plant genera, native to North and South America and Asia. And some Royal Fern individuals are said to be 1000 years old. Z3.

***6481**: 1/$3.50; **6482**: 3/$9.00; **6483**: 6/$16.75*



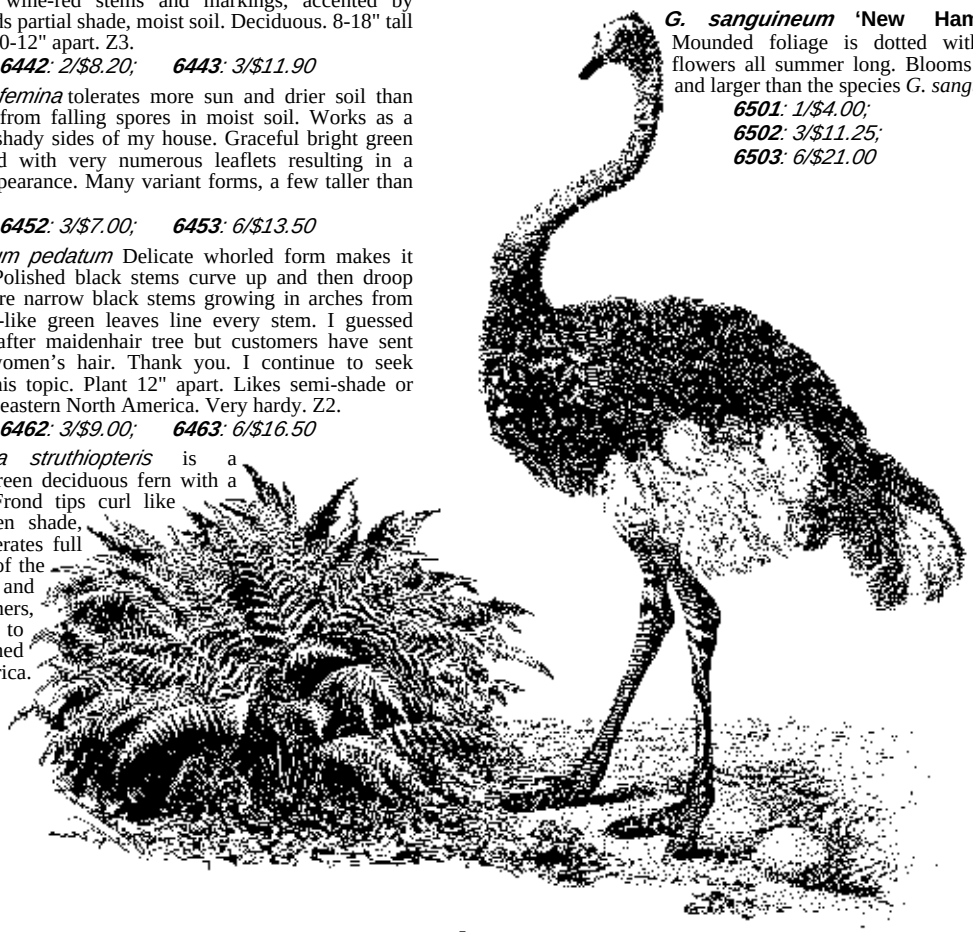
***Geranium* Cranesbill** Name confusion may be a reason why this attractive easy-to-grow genus is not more popular: the tender bedding and indoor plant with big red flowers often called geranium is actually *Pelargonium*. True geraniums have deeply cut leaves, clusters of single round cup-shaped to flat flowers and distinctive long narrow “cranesbill” seed-pods which flutter jauntily above the spreading foliage. Longevity, hardiness, long flowering period and attractive foliage make them useful for borders, edging or rock gardens. Very good ground cover. Foliage quickly forms dense clumps, and turns a rich red in fall. Tolerates partial shade, but flowers more in full sun. Plant 12-18" apart in average garden soil. Z4.

***G.* ‘Johnson’s Blue’** Covered with 2" vivid bright blue flowers from late spring into midsummer. Mat-like spreading foliage. 12-24" tall. Made a low hedge covered with “periwinkle-blue button-sized blossoms” in Anne Hallee’s beds last summer. **ME Grown.**

***6491**: 1/$3.50;*
***6492**: 3/$9.00;*
***6493**: 6/$17.00*

***G. sanguineum* ‘New Hampshire Purple’** Mounded foliage is dotted with magenta-rose 2" flowers all summer long. Blooms are a little darker and larger than the species *G. sanguineum*. 12-18" tall.

***6501**: 1/$4.00;*
***6502**: 3/$11.25;*
***6503**: 6/$21.00*



Helleborus orientalis **Hellebore** or **Lenten Rose** Mysterious and slightly sinister, evergreen in all but the coldest climates and blooming in winter or very early spring, hellebore was named by the ancient Greeks and is native to the chalky soils of Macedonia, Asia Minor and the Caucasus. Mentioned in English as early as 1400 as having poisonous and medicinal properties, specifically for mental disease. Looks like a small shrub, 15-18" tall, with leathery green leaves palmately divided into many lobed leaflets. Saucer-shaped flowers, 2-3" across, appear in very early spring, last up to eight weeks, and vary in color from white and greenish-white to pink. Likes dappled shade and neutral to alkaline soil with plenty of organic matter and good drainage. *H. orientalis* is the easiest of the genus to grow and tolerates a wide range of conditions. Will self-sow when content. Does not like to be disturbed and is dormant in summer. *Caution: all parts of the plant are poisonous.* Z4, possibly Z3.

6511*: 1/$5.75;*
6512*: 2/$9.90;*
6513*: 3/$13.80*

Hemerocallis **Daylily** produces a bush of narrow arched leaves topped with lily-shaped flowers from July to September and is the champion low-maintenance perennial. *Hemerocallis* means *beautiful day, day* referring to the fact that each flower lasts only a day, but since each scape is covered with buds, bloom periods can be extensive and the long stems work well in bouquets. Very hardy, flourishes under a wide range of conditions, from full sun to shade, wet to dry. Trouble-free, chokes out weeds. For foundation planting, terrace, brookside, border or wild garden. Plant 12-18" apart in average soil; however daylilies, like almost everything else, benefit from a shovel or two of compost. Of the over 40,000 registered cultivars, approximately 13,000 are still in circulation. And with hundreds of new ones added each year (I'll bet there's a daylily breeder in your neck of the woods) the names get progressively more ridiculous. I noticed 'Doublelicious' and 'Spacecoast Starburst' in catalogs this year. We list familiar and popular varieties and are trying to bring back a forgotten old cultivar.

If we run out of local supplies, where applicable, we will provide the same variety commercially grown. Z2.

H. flava **Lemon Lily** or **Custard Lily** When you see the first daylilies of the season blooming by old houses, they're probably yellow and probably Lemon Lilies. Clear bright yellow star-shaped flowers. Old variety with a tart lemony scent. 24" tall.

6521*: 1/$3.20;* ***6522****: 3/$8.00;* ***6523****: 6/$14.75*

H. **'Autumn Red'** Intense mahogany brick red with a thin yellow stripe down the middle of every other petal. Glowing orange-yellow throat illumintes its classy good looks. Mid to late season. 24-42" tall. Grown at Entwood Nursery. **ME Grown.**

6531*: 1/$3.20;* ***6532****: 3/$8.00;* ***6533****: 6/$14.50*

H. **'Catherine Woodbury'** Blushed light lilac-pink blends into soft yellow-green throat, free-blooming midseason diploid. Tall beautiful fragrant award-winner. It's time to give Catherine a rest and list an interesting newer variety, but I still can't part with this beauty. 30-50" tall.

6541*: 1/$3.40;* ***6542****: 3/$8.70;* ***6543****: 6/$15.75*

H. **'Frans Hals'** Eye-catching bicolor has three creamy yellow-orange petals alternating with three petals that are ruffled and dark red, almost bright rust, with a thin cantaloupe stripe down the middle. Many star-shaped flowers on each scape. Great way to blend "regular" daylilies into a color scheme with reds. 24-36" tall. Grower Anne Hallee's beds were magnificent with these last summer. Check out the photo on our website. **ME Grown.**

6551*: 1/$3.20;* ***6552****: 3/$8.00;* ***6553****: 6/$14.50*

H. **Renzo's Lily** Salvaged from the remains of a 1950s garden in Colorado, large, dramatic and well worth saving. We call it Renzo's after the man who found it. Clumps reach about 3' tall and flower scapes at least 4½'. Flowers, burnished orange shading to dark red with yellow throats, are double in the most literal sense: a second miniature flower sits inside the 4-5" outer flower. I had never seen doubling of that sort and find it fascinating. Many flowers per scape start blooming in late July here. We've tentatively identified it as a Kwanso Double, one of a series known for indestructibility bred by hybridizer A.B. Stout at the NY Botanical Gardens in the 1940s. We're excited to be bringing it back. **ME Grown.**

6561*: 1/$4.80;* ***6562****: 2/$8.50;* ***6563****: 3/$12.00*

H. **'Stella de Oro'** Golden yellow with delightful compact habit. Perhaps the longest bloomer: from late June till late August with ample moisture and fertility. Small 2-3" triangular-to-round flowers, fragrant award-winner. Was a fad in the '80s but has become a classic in the '00s. 12-18" tall. **ME Grown.**

6571*: 1/$3.20;* ***6572****: 3/$8.00;* ***6573****: 6/$14.00*

Hosta has bold foliage in orderly mounds with dependable sprays of fragrant bell-shaped flowers on tall stalks. Valuable and cherished low-maintenance border plant and shade-loving ground cover spring to frost. Formerly called **Plantain Lily** or **Funkia** but I have never heard either name. A friend described them as "so architectural!" Several gardeners my age have remarked to me, while admiring a fine planting of hostas, "I didn't used to like them, but now I see how great they are." With their varying colors, textures and clump sizes, hostas alone under trees can make an interesting woodland garden. Hostas tolerate a wide range of soil conditions, but need moisture. Those with blue and variegated leaves develop best color in shade. Deep shade gives fewer flowers. Plant 2-4' apart in rich soil with adequate humus. Divide every 4-5 years, or disturb clumps as little as possible; they improve with age as they spread and establish. Z3.

H. **'August Moon'** Large rounded golden puckering leaves stay attractive all summer in the sun; try it with Crocosmia, or let it glow in the shade garden. White flowers touched with lavender. 20-32" tall.

6581*: 1/$3.30;* ***6582****: 3/$8.50;* ***6583****: 6/$15.50*

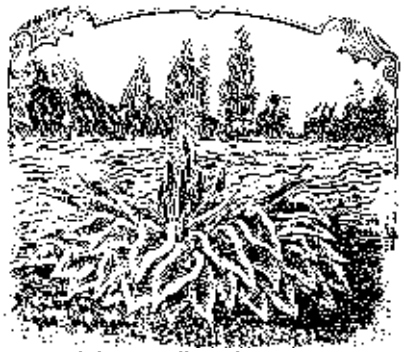
H. **'Krossa Regal'** The Royal Horticultural Society handbook on hostas captured it for me: "Giant blue-grey hosta of unique poise. Leaves: narrowly wedge-shaped, blade wavy, powdery greyish blue-green carried on long upright leaf stalks.…Distinct…for its vase-shaped foliage" in clumps up to 40" high. Pale lilac flowers on stalks up to 5'. A beauty which is also noted for good performance under adverse conditions.

6591*: 1/$3.50;* ***6592****: 3/$8.70;* ***6593****: 6/$16.00*

H. sieboldiana **'Frances Williams'** Outstanding cultivar often called the best hosta. Leaf interiors rich blue-green with a wide variable golden-yellow edge. Clumps around 36" high. White flowers on shortish slightly pendant stalks harmonize with the foliage rather than stand above it.

6601*: 1/$3.50;* ***6602****: 3/$9.00;* ***6603****: 6/$16.50*

H. **'Sum and Substance'** Huge rounded chartreuse-green very thick seersuckered leaves become more golden in sunlight. Popular award winner has very pale lilac flowers on leaning scapes. Said to have good slug resistance. Clumps become very large: to 36" tall and 60" across.



6611*: 1/$3.50;*
6612*: 3/$9.00;*
6613*: 6/$17.00*

H. undulata **'Albo Marginata'** Old favorite has green leaves with large wavy white edge, lavender blooms. Combine them with the "Medios" below to get a complementary contrast. Two-for-one sale on small plants. 12-18" tall.

6621*: 2/$3.90;*
6622*: 6/$10.90;*
6623*: 12/$18.50*

H. undulata **'Mediovariegata'** Leaves have white centers and undulating broad light green margins. Overall effect is very light and bright. Lavender flowers. 18" tall. Try it with the "Albos" above. Two-for-one sale on small nursery stock.

6631*: 2/$3.90;* ***6632****: 6/$10.90;* ***6633****: 12/$19.00*

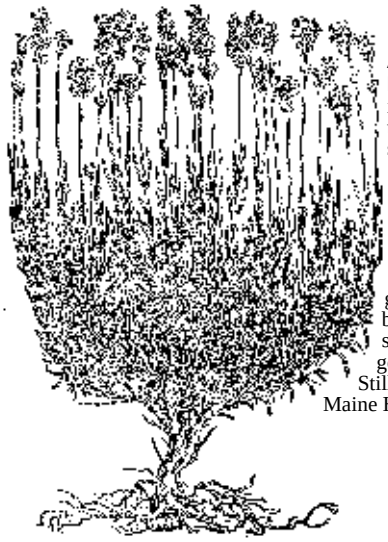
Iris sibirica **Siberian Iris** produces delicate flowers on thin stems good for cutting. Blooms in late June. Group in border or naturalize in colonies to show off tall slender foliage that looks good all summer. Tolerates poor dry soil, but performs best in rich moist acid soil. Unlike their bearded counterparts, these beardless irises have a woody crown, like a lot of moisture, can tolerate some standing water and cooler locations. Plant 12-15" apart in full sun or partial shade. Give them room to spread, and divide clumps every few years. Z3.

I. s. **Blue Siberian Iris** produces delicate flowers of deep rich blue, excellent for cutting. This blue is grown at Entwood Nursery and is worth listing season after season because it is outstanding in so many ways: vigor, hardiness, depth of color, number of blossoms, graceful foliage habit. Probably is 'Caesar's Brother' and that is what we'll substitute if we run out of locally grown stock. 42" tall. Z3. **ME Grown.**

6641*: 1/$3.25;*
6642*: 3/$8.50;*
6643*: 6/$16.00*

I. s. **'Butter and Sugar'** has white standards with butter-yellow falls. Their 2' stems are especially good for tall vase cuttings. When renowned Maine iris-breeder Dr. Currier McEwen introduced Butter and Sugar in 1970 it was the world's first yellow Siberian iris. 28" tall. **ME Grown.**

6651*: 1/$3.25;*
6652*: 3/$8.50;*
6653*: 6/$16.00*

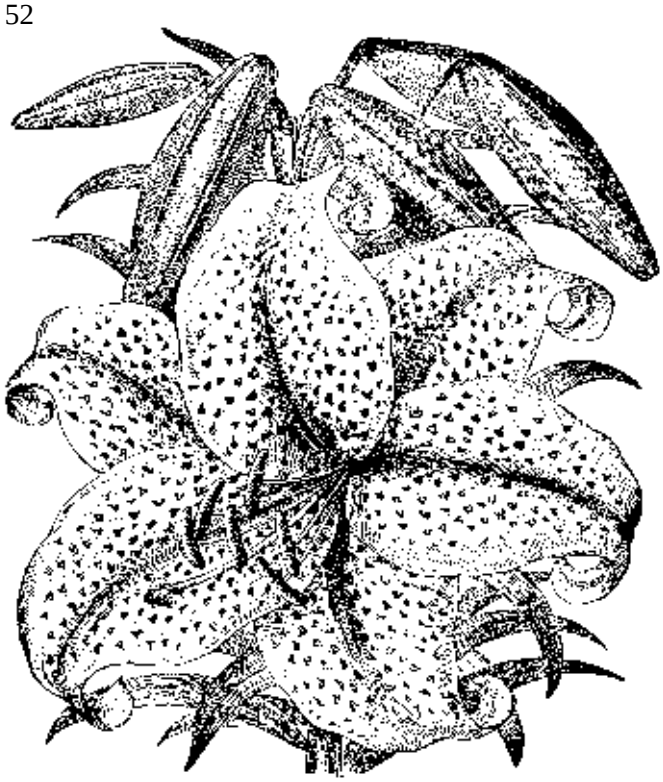


Lavandula angustifolia **Lavender 'Munstead'** blooms in spires of lavender-blue 15-18" tall flowers treasured for their scent. Valued for dried arrangements, potpourri, herb bundles; nice border, rockery, slope, edging or specimen plant. Aroma soothes the nervous system and perfumes the linen closet. Blooms all summer. Aromatic grey-green lanceolate foliage, bushy habit. Prune woody stems in spring. Likes full sun; demands good drainage. Plant 12-18" apart. Still organically grown by Blessed Maine Herb Farm. Z4. **ME Grown.**

6661*: 1/$4.80;*
6662*: 2/$8.50;*
6663*: 3/$12.50*

Liatris spicata **Blazing Star** or **Gayfeather** grows stiff dense "bottle-brush" spikes of magenta-purple flowers, from July to September, which open from the top down. Flowers are good for cutting; leave 1/3 of stem on plant. The foliage is fine and grass-like. Hardy, tolerates a broad range of growing conditions, but not drought. Extra moisture must be the reason they look so good again this season. I noticed a big field of them on Route 3 in South China; the display pretty near knocked my socks off. 20-30" tall. Plant 3" deep, 8-12" apart, in well-drained fertile soil. Z3.

6671*: 10/$2.25;*
6672*: 20/$4.00;*
6673*: 50/$9.50*



Lilium **Lilies** Queen of the perennial border, fabulously showy and surprisingly easy to grow. Breeders have been working on them for thousands of years and continue to develop new species and scores of new cultivars every year. It's a confusing terrain, but to oversimplify: **Asiatic** types bloom early, are a bit smaller (under 4'), than Orientals and often have their star-shaped blossoms facing upward. **Oriental** strains tend to be taller (may need staking), bloom later, with their very fragrant and flamboyant blossoms slightly pendant on tiny stems off the main stem. **Trumpets** have long trumpet-shaped blooms, resemble so-called Easter Lilies, are tall and late.

We are offering more low-priced small bulbs in the Asiatics, low prices on big bulbs in the Orientals, premium big bulbs for a classic stately trumpet and listing tiger lilies for the first time in ten years. Excellent as bedding plants or cutflowers, good as specimens or in solid masses, lilies prefer light shade to prolong summer blooms and to keep the bulbs cool. Mulch in full sun. Plant bulbs 6-8" deep, 6" apart in rich well-drained soil, slightly acid with good humus content. Z3.

L. **'Connecticut King'** Asiatic, 36" Long-lasting upward-facing star-shaped intense buttercup-yellow flowers. Bargain prices on 1¾" bulbs.

6681*: 2/$2.50;* ***6682****: 6/$6.50;* ***6683****: 12/$12.00*

L. **'Monte Negro'** Asiatic, 42" Stir a dab of dark chocolate into fire engine red and you've got the intense deep color of 'Monte Negro'. Early: the first lily to bloom in my garden. Bargain prices on 1¾" bulbs.

6691*: 2/$2.30;* ***6692****: 6/$6.00;* ***6693****: 12/$11.00*

L. **'Vermeer'** Asiatic, 36-40" Shell pink brushed white toward the center. Full disclosure: they looked beautiful in the catalog and Vermeer is my favorite painter. Bargain prices on 1¾" bulbs.

6701*: 2/$2.30;* ***6702****: 6/$6.00;* ***6703****: 12/$11.00*

L. **'Acapulco'** Oriental, 36-48" Fragrant. Deep pink with a hint of orange emerging from the throat. A few pink dots highlight the warm color. 1¾-2" bulbs.

6711*: 2/$2.60;* ***6712****: 6/$6.50;* ***6713****: 12/$12.00*

L. **'Casa Blanca'** Oriental, 40-44" (but I've seen them blooming from 3-8'). Pure white with textured white specks, and bobbing russet anthers. Absolutely gorgeous and their alluring fragrance fills the garden. Continues to be one of our most popular offerings. Big 2¼-2½" bulbs.

6721*: 1/$1.75;* ***6722****: 3/$4.50;* ***6723****: 6/$8.50*

L. **'Dizzy'** Oriental, 30-34" Fragrant. White with a bold line of rosy-red brushed the length of each petal and many prominent rosy specks. 1¾-2" bulbs.

6731*: 1/$2.00;* ***6732****: 3/$5.25;* ***6733****: 6/$10.00*

L. **'Stargazer'** Oriental, 24-30" Deep rose with white edge, spotted. Fragrant flowers are huge when plants become well established. Continues to be wildly and deservedly popular. Great prices on 2-2¼" bulbs.

6741*: 2/$2.00;* ***6742****: 6/$5.50;* ***6743****: 12/$11.00*

L. **'Tom Pouce'** Oriental, 24-30" Medium-pink with pronounced inner yellow stripe and dots. Fragrant. Bargain prices on 1¾" bulbs.

6751*: 2/$2.00;* ***6752****: 6/$5.50;* ***6753****: 12/$10.25*

L. **'Regale'** Trumpet, 40" and taller. White interior with yellow throat, bronzy-pink exterior. Graceful 5-6" long flowers have somewhat recurved petals. Fragrant and late-season. Very strong bloomer. Big 2½" bulbs.

6761*: 1/$3.00;* ***6762****: 3/$7.50;* ***6763****: 6/$14.25*

L. tigrinum **Tiger Lily** (synonym *L. lancifolium*) Robust grower produces scads of familiar orange nodding flowers with recurved petals generously flecked with dark purple dots, and prominent rusty-red anthers. Distinguished by purplish-black bulbils in the leaf axils along the stem. When the plant is happy, the bulbils will drop and sprout baby lilies by the score. A few shovels of compost keep my thriving plantation of tiger lilies happy year after year. Blooms in August in central Maine. 2-5' tall. Z2. 1½" bulbs.

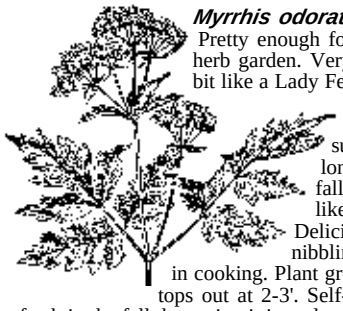
6771*: 1/$2.00;* ***6772****: 3/$5.25;* ***6773****: 6/$10.00*

Mertensia virginica **Bluebells** or **Virginia Bluebells** or **Virginia Cowslip** When Kip brought bluebells into the office during daffodil bloom time last year, I remembered what a spring treat they are. Clump-forming plant with erect stems and oval veined leaves bears clusters of nodding bell-shaped flowers on terminal cymes. Pink buds open to sky-blue or purple-blue flowers which look a lot like those of Pulmonaria or borage. In fact, another name is *M. pulmonarioides*. Beautiful in shade displays with ferns, Dicentra and Scilla. Prefer moist lowlands and acid woodsy soil in part shade. 18-24" tall. Dormant in summer. Native to eastern North America. Z3.

6781*: 1/$3.00;* ***6782****: 3/$7.50;* ***6783****: 6/$13.75*

Monarda didyma **'Jacob Cline' Bee Balm** or **Oswego Tea** Recent variety selected for its very large 5" red flowers, vigor and mildew resistance, Jacob Cline is now embraced in the nursery trade as "the best red." Bees, butterflies and hummingbirds love bee balm. Showy flower heads with tubular petals on pincushion heads borne above colorful bracts in July and August. Coarse aromatic foliage. Good for borders, naturalized in wet areas, and for cutting. A vigorous member of the mint family—some might say invasive. Plant crowns 16-20" apart in light shade in moist soil. Thrives in full sun if given adequate moisture or mulched with leaf mold; tolerates most conditions. 4-5' tall. Z3.

6791*: 1/$3.50;* ***6792****: 3/$9.50;* ***6793****: 6/$17.25*



Myrrhis odorata **Sweet Cicely** or **Garden Myrrh** Pretty enough for the border and tasty enough for the herb garden. Very attractive delicately cut leaves are a bit like a Lady Fern's except they are slightly fuzzy, not at all glossy. White flower umbels bloom in early summer, attract and support beneficial insects, and produce long shiny dark brown ridged seeds in fall. Immature seeds are green and taste like anise, as do young leaves and shoots. Delicious for summer teas and garden nibbling, good in salads and sometimes used in cooking. Plant grows 5-6' tall when thriving, sometimes tops out at 2-3'. Self-sows readily, but seed must be sown fresh in the fall; by spring it is no longer viable. That's why you can't find it in seed catalogs. Prefers moderately fertile moist well-drained soil and sun to dappled shade. Z3. **ME Grown.**

6801*: 1/$2.90;* ***6802****: 3/$7.50;* ***6803****: 6/$14.25*

Pæonia lactiflora **Garden Peony** or **Chinese Peony** Red shoots appear in spring and form a bushy clump, about 3x3', of lustrous dark green deeply lobed foliage. Fat spherical buds on sturdy stems above the foliage gradually open into large beautiful flowers in late spring to early summer. (Ants help the buds to open so don't discourage their presence.) Huge flowers are stunning on the bush and wonderful when cut. Most are fully double but we are listing a bowl-type and a single this year. If you catch flower buds when they are just marshmallow soft, they can be stored for weeks in the fridge for flowers later. May take up to 3 to 5 years to establish before blooming and resents being disturbed. Wait several years, until the plants have many stems, before attempting to divide. Stock has 2-3 eyes. Z3.

P. l. **'Bowl of Beauty'** Striking two-tone effect of this Japanese flower-type makes me think of a bright pink bowl holding one big scoop of French vanilla ice cream. A partially double row of carmine-pink petals opens to display a creamy-yellow carnation-like center made up of a profusion of narrow petaloids. Scented. Midseason. 38" tall.

6811*: 1/$8.75;* ***6812****: 2/$16.00;* ***6813****: 3/$21.75*

P. l. **'Festiva Maxima'** Introduced in 1851 and possibly my favorite peony, though it would be hard to decide between Festiva and Sarah Bernhardt. Large fragrant double white flowers have tiny crimson lines traced randomly through some of the inner petals. Early season. 36-39" tall.

6821*: 1/$6.50;* ***6822****: 2/$12.00;* ***6823****: 3/$17.00*

Garden Peonies Plant 2-3' apart with the eyes (where the growth shoots meet the root) no more than 1-1½" below the surface in well-drained soil, full sun to partial shade. Peonies are extremely long-lived so amend the soil richly when you plant. Compost, very well-rotted manure, bone meal and azomite are all recommended. After that they needing only a bit of weeding and feeding to flourish.

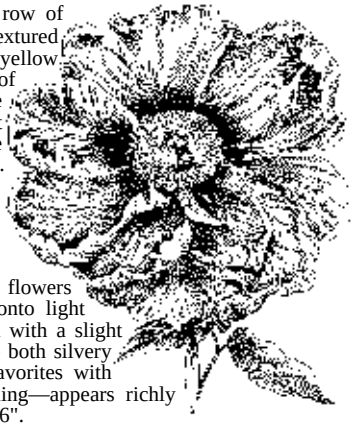
Mature plants often need staking or tying because flowers and buds can be quite heavy. For big plants, I've been using a chicken-wire method that Mary Fowler recommended. Cut a flat circle of chicken wire 2 or 3' in diameter and place it on the shoots when they are 8-10" tall. The shoots lift the wire, grow through it and use it for an invisible support.

Remove spent flowers after blooming, then cut dead foliage to near ground level in fall. Plant along the driveway; a heavy snowbank doesn't bother them.

Tree Peonies tolerate moist soils but require good drainage. Plants thrive in full sun but it may fade flower color. Plant graft union 2-3" below soil level, in rich well-drained soil. Don't prune except for removing dead wood in spring after plants have leafed out.

P. l. **'Kansas'** Vivid crimson red fully double blooms on very strong stems do not fade in sun. Has set the standard for double reds since its introduction more than half a century ago. Early to midseason. 36" tall.

6831*: 1/$5.75;* ***6832****: 2/$9.75;* ***6833****: 3/$13.75*



P. l. **'Krinkled White'** A single row of white slightly crinkled crepe-textured petals surround a pile of golden-yellow stamens that make me think of spinning straw into gold. Large flowers hold up well. The first single garden peony that we have ever offered. Mid to late season. 30-35" tall.

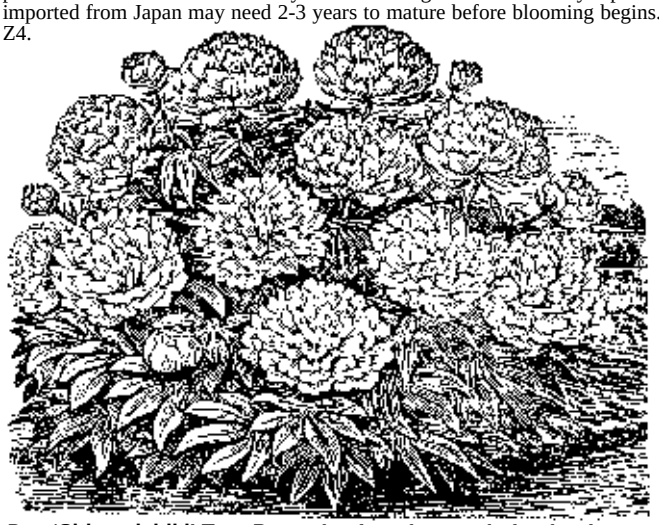
6841*: 1/$8.50;*
6842*: 2/$15.00;*
6843*: 3/$21.00*

P. l. **'Sarah Bernhardt'** Fragrant flowers open with narrow red lines shot onto light rose-pink. Matures to delicate pink with a slight creamy-silvery edge. Can a pink be both silvery and warm? This one is. One of my favorites with exactly the right amount of doubling—appears richly full but not crammed. Late season. 36".

6851*: 1/$5.75;* ***6852****: 2/$9.75;* ***6853****: 3/$14.00*

Pæonia suffruticosa **Japanese Tree Peony** or **Moutan** is expensive, but as garden writer Peter Coats says, "It is worthwhile to sell everything one possesses to buy pæonies, and to dig up everything else in the garden to make room for them." A fashion craze in China by the 7th century, tree peonies appear in poets' songs and as decorative motifs in architecture, porcelain and fabric. 19th century botanical explorer Robert Fortune reported a specimen outside Shanghai that produced 300-400 flowers a year.

Deciduous shrub with deeply cut narrow-lobed medium green foliage forms many (though probably fewer than 300 in its first century) large stunning flowers in early June, before Garden Peony. Semi-double extravagantly big flowers with loose satiny petals. Full sun promotes fastest growth but fades flowers which do best in dappled shade; fanatics shade plants with umbrellas while they are flowering. 48-60" tall. 1-yr. plants imported from Japan may need 2-3 years to mature before blooming begins. Z4.



P. s. **'Shimanishiki' Tree Peony** bicolor: white streaked with red.

6861*: 1/$19.75;* ***6862****: 2/$36.50;* ***6863****: 3/$49.50*

P. s. **Violet Tree Peony**

6871*: 1/$15.00;* ***6872****: 2/$24.50;* ***6873****: 3/$35.00*

P. s. **White Tree Peony**

6881*: 1/$14.75;* ***6882****: 2/$24.00;* ***6883****: 3/$34.00*

P. s. **Yellow Tree Peony**

6891*: 1/$15.00;* ***6892****: 2/$24.50;* ***6893****: 3/$35.00*

Perovskia atriplicifolia **Russian Sage** blossoms in midsummer with slender airy spires of lavender-blue tubular flowers. Finely divided grey leaves are aromatic when crushed. 1995 PPA Plant of the Year. Low-maintenance background or filler beautiful with roses or whites and blues. Perovskia has one of the longest bloom times of any blue-flowered plant. Upright habit, semi-woody shrub, emerges slowly in spring; cut back after frost. Tolerates drought, loves heat and full sun, can't bear standing water. 3-4' tall. Likes to spread out once it gets established; plant 24-36" apart. I suspect that Zone 4 reports of winterkill are from poor drainage rather than cold, so a cautious Z4.

6901*: 1/$3.75;* ***6902****: 3/$9.50;* ***6903****: 6/$17.75*

Phlox paniculata **Garden Phlox** produces large spreading clusters of fragrant showy long-blooming flowers in mid to late summer when so many blooms are fading, and produces delicate satiny panicles when so many blooms are coarse. Wonderful color and fragrance for accents, border or naturalized area. Attracts butterflies and hummingbirds. Essential component of late-summer wedding bouquets. Extend flowering season by watering and prompt deadheading. Prefers humus-rich soil that stays cool and moist in summer and regular sidedressing. Plant 2' apart in full sun to partial shade. Z3.

P. **'Bright Eyes'** Each individual flower is delicate shell-pink with a vibrant neon-pink eye. Large 4-5" flower clusters light up a bed on overcast days. Very fragrant, too. Plants around 36" tall have a tidy comparatively compact habit. Deep red bronzy wine-colored foliage on their new growth and buds makes the plants decorative from mid-June onward. **ME Grown.**

6911*: 1/$3.00;* ***6912****: 3/$8.50;* ***6913****: 6/$16.00*

P. **'David'** White flowers cover the plant so completely with enormous (6x7") and fragrant blooms that it was voted the PPA Plant of the Year for 2002. 30-42" tall.

6921*: 1/$3.00;* ***6922****: 3/$8.25;* ***6923****: 6/$15.75*

P. **'Orange Perfection'** Vigorous grower is brilliant orange with slightly darker eye. Give the phlox bed a new twist; I think it would look striking with combined with the white, the red or the pink. 36".

6931*: 1/$3.00;* ***6932****: 3/$8.25;* ***6933****: 6/$15.75*

P. **'Starfire'** Reliable old favorite often considered the best red. Large (6x6") abundant cherry-red flower clusters are fragrant from midsummer into fall. 25-36".

6941*: 1/$3.00;* ***6942****: 3/$8.25;* ***6943****: 6/$15.50*

Podophyllum peltatum **Mayapple** or **American Mandrake** Fascinating wildflower native to the eastern U.S. that you may recognize as soon as you see it. Smooth deeply divided distinctive umbrella-like leaves grow in pairs. (Peltate means shaped like a shield or a circle with stem near the center.) A single waxy white flower 2" across droops under the umbrella in spring, its stem in the fork of the two leaf stems. Fruit is a large lemon-like yellow berry. Forms colonies via creeping rhizomes and becomes a 12-18" tall groundcover in shade to part shade, rich moist woods or moist fields bordering on woods. Roots and leaves poisonous, native Americans and early settlers used as a purgative. Nursery propagated. Z4 maybe 3.

6951*: 1/$3.00;* ***6952****: 3/$7.75;* ***6953****: 6/$14.50*

Polygonatum biflorum **Solomon's Seal** forms clumps of graceful arching stems about 3' long with long narrow alternate leaves. Greenish-white bell-shaped tubular flowers dangle from the stems in a row in late spring, and become small round blue-black fruits in early fall. Shade- and moisture-loving, with a serene habit, Solomon's Seal is ideal for the shade or woodland garden and makes a good foil for ferns. Don't confuse it with False Solomon's Seal which has a plume-like flower at the *end* of its stem. Native Americans used the root tea for ailments of stomach and lung and for general debility, and used washes from the root for all kinds of external injuries. I am not aware of local herbalists using this native plant nowadays. Sends up a few more stems every year; sturdy and long-lived. Native eastern wild plant, rescued from wild sites about to be developed, and nursery propagated. Z3.

6961*: 1/$3.00;* ***6962****: 3/$7.75;* ***6963****: 6/$14.50*

Thalictrum rochebrunianium **'Lavender Mist' Meadow Rue** Thalictrum is back and again the highlight of our visits to growers' farms. The row of 6-9' tall plants in bloom did make a lavender mist, aptly described as looking like a wall in a fairy kingdom. In early spring columbine-shaped blue-tinted foliage emerges from the ground, sending up a bud which adds a segment of stunning lavender-purple stems and blue-green leaves, which, in turn, sends up another segment, building height throughout the season. Finally a terminal segment containing flower buds opens in late July in a large puff of tiny single flowers in loose airy panicles. Each flower is light lavender with an acid-yellow center. Good for cutting if you can reach that high. Beautiful in borders, edges of woods or ponds. Anne Hallee suggests using it as a foliage wall to define walkways or corridors. Plant 2-3' apart. Moist humus-rich soil, sun to part shade. Z4. **ME Grown.**

6971*: 1/$3.50;* ***6972****: 3/$9.00;* ***6973****: 6/$17.50*

Tiarella cordifolia **Foam Flower** or **False Mitrewort** Native wildflower nicknamed for its foamy profusion of blossoms. Dense upright finger-shaped racemes 12" tall are covered with countless teensy creamy-white blossoms in spring. Foliage, heart-shaped, lobed and toothed, resembles maple leaves and becomes bronze red in autumn. Likes cool shaded spots, spreads by stolons. Easy to grow. Plant 6-12" apart in a woodland garden. Nursery-propagated stock salvaged from wild plant sites that were about to be destroyed. Z3.

6981*: 1/$2.90;* ***6982****: 3/$7.50;* ***6983****: 6/$13.75*

Tricyrtis hirta **Toad Lily** or **Japanese Toad Lily** Every year I allow myself at least one "picture seduction" and list a plant I don't know based on a picture in a glossy catalog. And Toad Lily is an irresistible name, too. Flowers looked both pretty and odd; the more I researched it, the more interested I became. Blooms in late fall, in partial to full shade. Woodland plant spreads by runners. Multiple small white starry flowers distinctively spotted with purple on gently arching stems have pointed petals that radiate out from the center and curve back. Showy calyx with three sepals. Plant where you can enjoy them nearby, not very showy at a distance. 20-28" tall plant has very fuzzy (*hirta* means hairy) leaves. Native to Japan. Let us know what you think of it. Z4.

6991*: 1/$2.90;* ***6992****: 3/$7.50;* ***6993****: 6/$14.00*

Trillium erectum **Red Trillium** or **Wakerobin** or **Stinking Benjamin** Our local wildflower preserve features huge patches of red trillium blooming in late April, a spectacular and pleasing sight. All the descriptions mention a bad smell, but we don't get the "stinking" part, detecting only a faint oceany hint of tidal flats. Maroon blossom with three petals and three sepals sits erect on a short stem above the three oval leaves in a single whorl. Grows in moist rich woods, full or part shade, from Nova Scotia to the mountains of Georgia, west into Michigan. Nursery-propagated stock. Z4.

7001*: 1/$3.00;* ***7002****: 3/$7.75;* ***7003****: 6/$14.50*

Trollius x cultorum **'Lemon Queen' Globeflower** One could call them big overgrown hyper-selected buttercups and I do, but I am crazy about Trollius. Palmately lobed, then further divided and toothed (buttercup-like) leaves form a mound. Bowl-shaped bright lemon-yellow semi-double flowers 3" across bloom in late spring, around the time of late tulips, on stems above the foliage. A fancy flower in spring when few are available. Excellent for cutting. Ideal for a moist border, streamside, or naturalizing in a damp meadow. Like moist to wet settings, heavy soil, full sun to part shade. Cut back after blooming. Plant 8-12" apart. 20-30" tall. Z3.

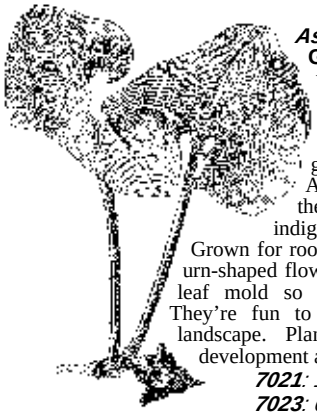
7011*: 1/$3.75;* ***7012****: 3/$9.50;* ***7013****: 6/$17.75*

Perennial Medicinal Plants

Growing medicinal plants in your own garden gives you the opportunity to come to know their personalities, forms, uses and spirits. It also helps to prevent wild plants from being overharvested. Medicine you make from your plants returns you to your garden, regardless of the time or the place that you use it.

Many of the other plants we list have a tradition of medicinal use as well. These include Lavender, Bee Balm, Peony, Rose, Elder, Hops, Ginkgo, Linden, Hawthorne, Witch Hazel, Blueberry, Cranberry and Highbush Cranberry. (Index on p. 59.)

Like most perennials, these appreciate a fall mulch and a sidedressing of compost or leaf mold in the spring. Some may take a year or more to establish before they flower; roots often take several years to reach harvestable maturity. The organic listings are certified by MOFGA Certification Services and grown by Gail Edwards of the Blessed Maine Herb Farm in Athens. Supplies may be limited, so order early.



Asarum canadense **Canadian Wild Ginger** Heart-shaped leaves up to 7" wide will spread into a beautiful groundcover 6-12" tall if given humus, shade and plenty of moisture. Leaves are large and slightly fuzzy, not small and glossy like the European species. Aromatic roots used like other gingers for their warming qualities and for soothing indigestion, coughs, colds, motion sickness. Grown for roots and foliage. The small reddish-brown urn-shaped flowers grow near the soil surface or in the leaf mold so crawling insects will pollinate them. They're fun to search for but won't decorate your landscape. Plants rescued from wild sites before development and nursery propagated. Z3.

***7021**: 1/$2.90; **7022**: 3/$7.50; **7023**: 6/$14.25*

Cimicifuga racemosa **Black Cohosh** or **Black Snakeroot** flourishes in the wilder part of the garden or shady border. In late July and August, long arching racemes of creamy flowers rise above the mound of compound foliage, hence another common name, **Fairy Candles**. Anti-spasmodic for cramps, pains, cramped nerves and emotions, included in many peri-menopausal formulas. I've heard quite a few women my age say rather passionately, "I *love* this plant!" Diuretic and anti-inflammatory. Easy to grow, long-lived, needs division or harvest every 4-5 years. 36-72" tall. Plant 30-36" apart in rich moist soil high in humus. Good in boggy spots. Prefers part shade, but tolerates full sun in deep moist soil. Z3.

***7031**: 1/$4.75; **7032**: 2/$8.75; **7033**: 3/$12.00*

Codonopsis pilosula **Poor Man's Ginseng** would be fun to grow as a novel ornamental even apart from its medicinal properties. Tendrilly twining vines are about 4' long in their second year and have small ovate leaves. Mature vine about 6' long. Buds look like green peas, swell to little green balloons and flower as green bells with purple veining, then mature to five-sided-balloon seed pods.

Considerably easier to grow than true ginseng. Energizing, adaptogenic, supports the deep immune system. Called *dang shen* in China. Harvest 4- to 6-year-old roots. Sun to part shade, good drainage. Year-old plants are certified organic. Z4. **ME Grown.**

***7041**: 1/$5.25; **7042**: 2/$9.00; **7043**: 3/$13.00*

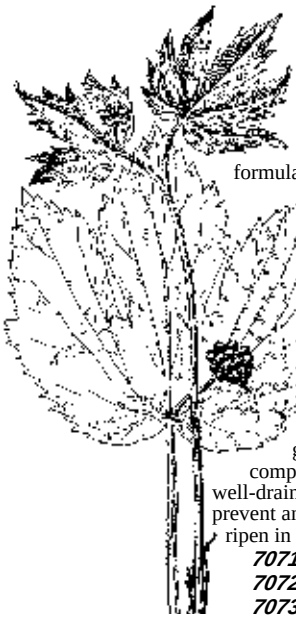
Echinacea purpurea **Purple Coneflower** Some year we may offer a named ornamental strain of Echinacea, but Gail Edwards' organically grown medicinal strain is also stunningly beautiful and strikes me as more valuable than a merely ornamental cultivar, even if you use it only for ornament. *Echinos* means spiny and the flower's big conical centers are very spiny and coppery yellow-brown, surrounded by a single row of slightly reflexed lavender-purple petals. Flowers attract butterflies and beneficial insects, and last well when cut. Their color combination marries pinks, oranges, lavenders and golds that wouldn't ordinarily go together in beds or bouquets. Tincture the roots of 3-year-old plants for a remedy that gives an immediate boost to the immune system. That's why people use it when they feel a cold or flu coming on. Vigorous grower likes full sun and sandy loam, self-sows and tolerates wind, heat and drought once established. 30-48" tall. Plant 20-30" apart in light soil. Certified organic. Z3. **ME Grown.**

***7051**: 1/$5.25; **7052**: 2/$9.00; **7053**: 3/$13.00*

Glycyrrhiza uralensis **Chinese Licorice** is valued as a medicine, a sweetener and a flavor. Soothes stomaches, sore throats, mucous membranes; balances energy and hormones. Good for menopausal women, but people with hypertension and diabetes should avoid. *Gan cao* in China. Gail recommends sucking on slices of fresh or dried roots, which can be harvested from the second year onward and are astoundingly sweet. Good for making herbal concoctions palatable. Leguminous plant has compound oval leaves. Grows to 1-5' tall. Prefers part shade and moisture. Plant 8-12" apart. Once established, roots spread out vigorously. One-year-old organic plants. Z5. **ME Grown.**

***7061**: 1/$5.25; **7062**: 2/$9.00; **7063**: 3/$13.00*

ME Grown = grown in Maine by a member of the Fedco growers coop

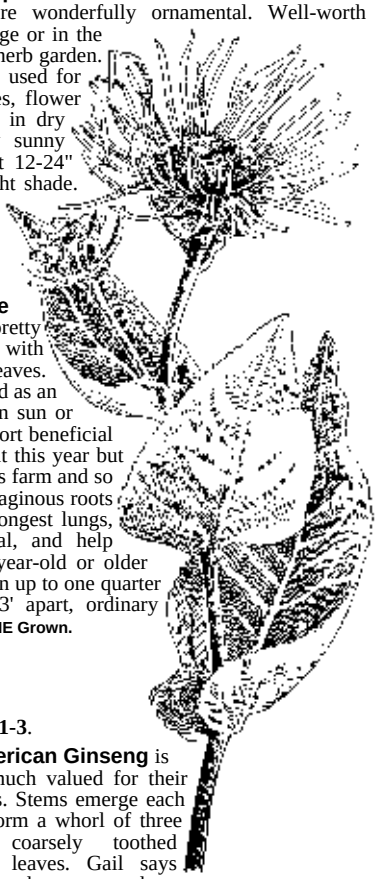


Hydrastis canadensis **Goldenseal** Native Americans taught Europeans how to use this healing plant which has astringent and powerfully tonic qualities for all mucous membranes. Used in cold formulas and for other respiratory complaints, as well as for inflammations of the digestive tract. Tincture the yellow root or use it dried and powdered, leaves have weak medicinal properties as well. Plants have upright stalks, typically forked into two stems, each with a deeply incised dark green leaf with 5-9 lobes and toothed edges. A white flower appears above the foliage in spring and matures to a red berry. 6-12" tall. Likes rich woodland soil; culture is similar to ginseng's but goldenseal is easier to grow. Use plenty of compost and leaf mold for very humus-rich well-drained soil. Grow in almost total shade and prevent any competition. Harvest root after the seeds ripen in fall. Organically grown. Z3. **ME Grown.**

***7071**: 1/$7.50; **7072**: 2/$12.75; **7073**: 3/$18.50*

Hyssopus officinalis **Hyssop** Blue-violet flowers on erect stalks blossom June-September and are wonderfully ornamental. Well-worth growing for an aromatic low hedge or in the border even if you don't have an herb garden. Bees love it. Leaf infusions long used for sore throats and stomach troubles, flower spikes in cough syrups. Thrives in dry soil, useful on slopes and any sunny difficult place. 12-20" tall. Plant 12-24" apart in poor soil, full sun to light shade. Organically grown. Z3. **ME Grown.**

***7081**: 1/$4.50; **7082**: 2/$8.40; **7083**: 3/$11.50*



Inula helenium **Elecampane** Spectacular big plant sports pretty bright yellow daisy-type flowers with very narrow petals, long coarse leaves. Achieving heights of up to 8', good as an accent or part of a wild border in sun or part shade. Helps attract and support beneficial insects. I wasn't planning to list it this year but it was strikingly beautiful at Gail's farm and so photogenic for the website. Mucilaginous roots are expectorant; support and decongest lungs, are anti-bacterial and anti-fungal, and help balance blood sugar. Harvest 2-year-old or older roots in mid-fall when they contain up to one quarter their weight in inulin. Plant 2-3' apart, ordinary garden soil. Organically grown. **ME Grown.**

***7091**: 1/$4.50; **7092**: 2/$8.40; **7093**: 3/$11.50*

Lavandula **Lavender** See #**6661-3**.

Panax quinquefolius **American Ginseng** is grown for its roots which are much valued for their tonifying and restorative qualities. Stems emerge each spring and form a whorl of three coarsely toothed leaves. Gail says when you see how it emerges from the soil, like a curled-up claw, you know right away that it's powerful. Grows 1-3' tall. Small white star-shaped flowers in summer followed by a bright red fruit. *They are fussy about location*. Need 90% shade and deep rich moist well-drained soil in a hardwoods-type habitat. Harvest at least four- and preferably six-year-old roots. Organically grown tiny one-year-old rootlets. Z3. **ME Grown.**

***7101**: 1/$7.50; **7102**: 2/$12.75; **7103**: 3/$18.50*

Item	Name	Fedco-Coop Grown	Bundle Size	For Wet Spots	For Shady Spots	For Dry Spots	For Wildlife	Vining	Specimen	Hedges	Ground Covers
1679	American Plum					♦	♦			♦	
1900	Lowbush Blueberry	❁		♦		♦	♦				♦
1920ff	Highbush Blueberry			♦			♦			♦	
2010ff	Grape	some					♦	♦			
2220	August Red	❁	10				♦				♦
2260	Fall Gold	❁	10				♦			♦	♦
2325-6	Nova		10,25				♦			♦	♦
2330-1	Prelude		10,25				♦			♦	♦
2340	Royalty Purple		10				♦			♦	
2360-1	Taylor		10,25				♦			♦	♦
2390	Fort Kent King	❁	3				♦			♦	♦
2444ff	Kiwi	❁					♦	♦			
2496	American Cranberry	❁	10	♦							♦
2570	Regent Juneberry			♦	♦	♦	♦				
2640	Cornelian Cherry				♦		♦				
2670ff	Hops		3					♦			
2722	Beach Plum	❁				♦	♦			♦	
2725	Nanking Cherry	❁					♦			♦	
2760ff	Elderberry	❁		♦			♦			♦	
2880ff	Highbush Cranberry	❁		♦	♦		♦			♦	
2910	Balsam Fir		5		♦	♦	♦			♦	
3000	Dawn Redwood	❁		♦			♦		♦		
3040ff	Spruce		5				♦		♦	♦	
3170	Red Pine		5			♦	♦				
3180	Eastern White Pine		5				♦		♦	♦	
3230	American Arborvitae		5	♦	♦		♦			♦	
3260	Eastern Hemlock		5				♦		♦	♦	
3400	American Chestnut	❁					♦		♦		
3405	Chinese Chestnut	❁					♦		♦		
3427	Ozmun #2 Hazelbert	❁				♦	♦			♦	
3455	Black Walnut	❁					♦		♦		
3625	Red Maple			♦			♦		♦		
3630	Sugar Maple						♦		♦		
3655	Paper Birch Clump						♦		♦		
3670	Northern Catalpa								♦		
3720	Brown Ash			♦							
3730	Ginkgo						♦		♦		
3775	Amur Chokecherry	❁					♦		♦		
3785	White Oak						♦		♦		
3788	Swamp White Oak			♦			♦		♦		
3797	Red Oak					♦	♦		♦		
3832	Cape Rosier Willow	❁		♦							
3833	Niobe Weeping Willow	❁		♦					♦		
3843	Snake Willow	❁		♦					♦		
3850	American Linden						♦		♦		
3907	Redbud				♦				♦		
3910	Fringe tree			♦			♦		♦		
3920	Pagoda Dogwood	❁		♦			♦		♦		
3925	Kousa Dogwood						♦		♦		
3968	Wedding Bells Silverbell	❁							♦		
3970	Witch Hazel	❁		♦	♦		♦				
4010ff	Crabapple	most					♦		♦		
4192	Pink Pussy Willow	❁		♦							
4207	Showy Mountain Ash						♦		♦		
4212	Japanese Tree Lilac					♦			♦		
4225	White Forsythia	❁							♦		
4227	Bottlebrush Buckeye				♦					♦	♦
4235	Dutchman's Pipe	❁			♦			♦			
4240ff	Chokeberry			♦	♦	♦	♦			♦	
4267	Siberian Peashrub					♦	♦			♦	
4268	American Bittersweet							♦			
4270	Buttonbush	❁		♦	♦		♦				
4271	Red Flowering Quince	❁					♦		♦		
4273	Ruby Spice Summersweet	❁		♦	♦		♦				
4274	Sweetfern	❁		♦		♦					♦
4277	Silky Dogwood	❁		♦			♦			♦	♦
4281	Silver and Gold Dogwood			♦			♦				♦

Item	Name	Fedco-Coop Grown	Bundle Size	For Wet Spots	For Shady Spots	For Dry Spots	For Wildlife	Vining	Specimen	Hedges	Ground Covers
4283	Harry Lauder's Walking Stick								♦		
4285	Royal Purple Smokebush					♦			♦		
4340	Northern Gold Forsythia									♦	
4358	Large Fothergilla	❁		♦	♦					♦	
4375	Annabelle Hydrangea	❁			♦						
4377	Endless Summer Hydrangea				♦				♦		
4380	Pee Gee Hydrangea	❁			♦				♦		
4398ff	Winterberry	most		♦			♦			♦	
4445	Beautybush	❁							♦		
4450	Dropmore Scarlet Honeysuckle	❁			♦		♦	♦			
4480	Bayberry	❁				♦	♦			♦	♦
4530	Sweet Mockorange					♦			♦	♦	
4537	Tilden Park Ninebark	❁		♦							♦
4574ff	Potentilla			♦		♦			♦		
4600	Ground Sand Cherry	❁				♦	♦				♦
4624	Staghorn Sumac					♦	♦			♦	♦
4627	Rosa rugosa		3			♦	♦			♦	♦
4630	White Rugosa Rose					♦	♦			♦	♦
4633	Blanc Double de Coubert Rose					♦			♦	♦	
4643	Champlain Rose					♦			♦		
4679	John Davis Rose					♦			♦		
4681	JP Connell Rose					♦			♦		
4687	Magnifica Rose					♦	♦		♦	♦	
4697	Morden Sunrise Rose					♦			♦		
4710	Seven Sisters Rose					♦	♦		♦	♦	
4718	Therese Bugnet Rose					♦			♦	♦	
4738	Black Pussy willow	❁		♦							
4740	Blue Leaf Arctic Willow	❁		♦			♦			♦	♦
4742	Japanese Fantail Willow	❁		♦						♦	
4760	Fritschiana Spirea	❁							♦		♦
4763	Shirobana Spirea	❁							♦		
4770	Vanhoutte Spirea								♦		
4790	Common Purple Lilac	❁				♦				♦	♦
4795	Arch McKean Lilac	❁				♦				♦	
4856	President Grevy Lilac	❁				♦				♦	
4880	Asessippi Lilac	❁				♦				♦	
4881	Excel Lilac	❁				♦				♦	
4883	Mount Baker Lilac	❁				♦				♦	
4894	Minuet Lilac	❁				♦					
4915	Summer Glow Tamarisk								♦		
4943	Emerald Triumph Viburnum	❁					♦			♦	
4964	Seneca Siebold Viburnum	❁					♦			♦	
4975ff	Weigela	❁							♦		
4985	Aunt Dee Wisteria	❁						♦			
6271	Jack-in-the-Pulpit				♦						
6371	Lily of the Valley				♦	♦					♦
6431ff	Ferns			♦	♦						♦
6491ff	Geranium	some									♦
6511	Hellebore				♦						
6581ff	Hosta			♦	♦						
6641ff	Siberian Iris			♦							
6661	Lavender	❁				♦					
6791	Bee Balm			♦							
6861ff	Tree Peony								♦		
6901	Russian Sage					♦					
6951	Mayapple			♦	♦						♦
6961	Solomon's Seal			♦	♦						
6991	Toad Lily				♦						
7001	Trillium				♦						
7021	Canadian Ginger				♦						♦
7031	Black Cohosh			♦	♦						
7041	Codonopsis	❁						♦			
7081	Hyssop	❁				♦					

ff=and following

BULLETIN BOARD

Fedco Trees
PO Box 520
Waterville ME 04903
207-873-7333

To contact MOFGA, (the Maine Organic Farmers & Gardeners Association) phone 207-568-4142 or go to www.mofga.org.

FEDCO ON THE WEB

Fedco Trees can be found on the Web at **www.fedcoseeds.com**. Visit us throughout the year for event listings, planting instructions and links to other plant websites. This year we will begin posting color photos of most of the items we offer. During pre-order season you'll find current information on the availability of catalog items.

You are also welcome to **email us** at **trees@fedcoseeds.com**.

Maine Apple Day is on Saturday, October 23, 2004, from 10:00 to 4:00 in the exhibition hall of MOFGA's Common Ground in Unity.

Annual celebration of apples includes:
- cider-making all day
- tastings
- talks on fruit, wine and cider
- apples for sale
- an apple pie contest

Bring your best specimens for everyone to admire and mystery apples for identification.

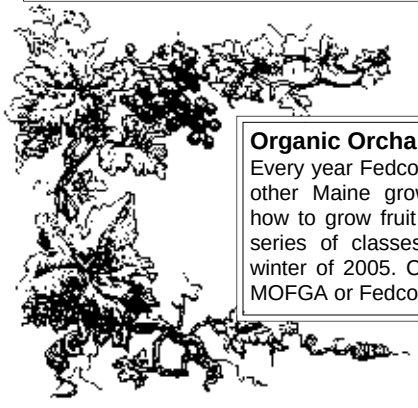
For more information contact MOFGA, or Highmoor Farm at 207-933-2100.

2005 Tree Sale

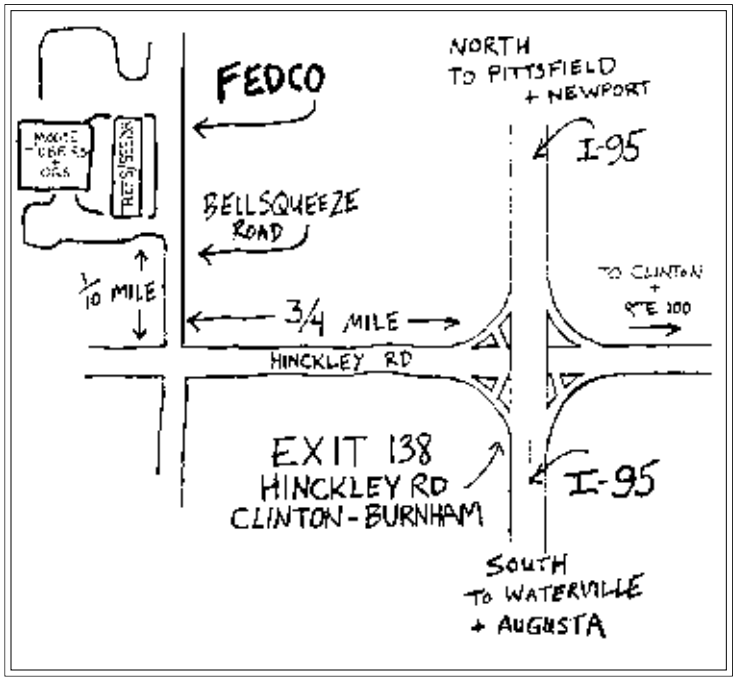
Friday and Saturday April 29 & 30
9:00 until 3:00
for customers with preorders

Friday and Saturday May 6 & 7
9:00 until 3:00
for everyone

Maine Tree Crop Alliance's annual **Scionwood Exchange**, is Sunday, March 27, 2005, noon to 4:30 in the exhibition hall of MOFGA's Common Ground in Unity.
Annual event includes grafting workshop and seed swap. Bring seeds, scionwood and cuttings to share. Books and grafting supplies for sale. Contact MOFGA for more information.



Organic Orcharding Classes
Every year Fedco's John Bunker and other Maine growers teach people how to grow fruit organically. A new series of classes will begin in the winter of 2005. Check in January at MOFGA or Fedco for details.



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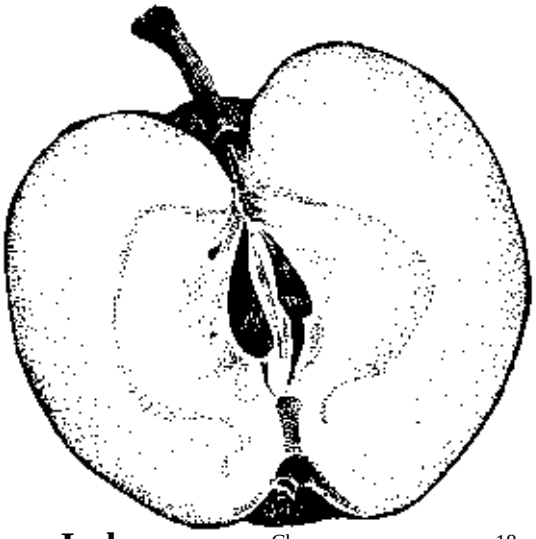

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New for 2005

- Fort Kent King blackberry
- New apples include:
  - Gray Pearmain
  - Milo Gibson
  - Scott's Winter
  - Vermont Gold
  - Westfield Seek-No-Further
- several new cider apples
- Garnet Beauty peach
- Nova raspberry
- many new crabapples
- several new lilacs
- Beautybush
- 'Tilden Park' Ninebark
- Amur Chokecherry
- 'Sekka' Fantail Willow
- Fritschiana Spirea
- 'Samba' & 'Tango' Weigelas
- Tiger Lily
- Mayapple
- Bluebells
- Toad Lily

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Trees & Shrubs
Fruits & Berries
Hardy Perennials
for Spring Planting

Save this catalog—it has planting instructions.

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Final Order Deadline March 4, 2005

2005 Tree Sale:
April 29-30 for preorder customers
May 6-7 for the public

original catalog art by
John Bunker, Phoebe Bunker, Tom Siebert,
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Final order deadline March 4, 2005

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- **Complete ordering information on page 3.**
- Please fill out the address information and totals blocks above. We *must* have a road name for UPS delivery.
- For early delivery of rootstock or for scionwood, send a SASE for the order form or download it from our website.
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